Report to the Science Advisory Board
of the Northwest Territories

CONTRIBUTION TO THE NORTHWEST TERRITORIES

POPULATION STUDIES

1961-1985

by

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with the collaboration of

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Population Studies, 1961-1965
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FOREWORD

The human population in the Northwest Territories is made up of three basic and different stocks — the original inhabitants of Inuit and Dene and the more recent Euro-Canadians. Each of these components of the human population in the Northwest Territories has similar and to some extent different forces affecting population growth and distribution. In order to better understand the magnitude and implications of these changes in population characteristics, the Science Advisory Board launched this study in 1977 as its first major effort. This paper is the first of a series that will report the results of the studies conducted by the Science Advisory Board. While the views expressed in this paper are those of the Author, the Board feels strongly that this information will be useful to persons involved in making decisions affecting northern Canadians. We hope the paper will also serve as an important benchmark in a continued study of the growth and change of the human population of the Northwest Territories.

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RÉSUMÉ

Cette étude de la population des Territoires-du-Nord-Ouest (46,386 habitants en Janvier 1978) à pour triple but de dégager les caractéristiques démographiques récentes, de prévoir l'évolution décennale et d'établir des recommandations auprès des politiciens et des chercheurs.

Après avoir souligné l'insuffisance du stock statistique et l'utilité de recherches pilotes, nous avons trouvé des concepts appropriés d'analyse: population "permanente," population "courante" (et sous-groupes), classes de peuplement, types de chômage . . . L'histoire récente montre que l'accroissement naturel s'est avéré plus important que les migrations dans l'augmentation des populations. Les mouvements extérieurs commandent toutefois une évolution saccadée: l'accroissement annuel était de 2,706 individus en 1970 mais seulement de 510, trois ans plus tard. Le phénomène de centralité s'exerce au profit de la capitale de Yellowknife (un peu moins de 10,000 habitants) qui, depuis dix ans, a capté 63 pour cent de toutes les migrations territoriennes nettes.

Dresser des projections démographiques constitue un grand risque dans le cas des économies dominées. Un certain nombre d'hypothèses (p.e., l'accroissement du "political money") ont été faites. Techniquement, les projections sont basées sur les classes d'âge, et le sexe, suivant les masses ethniques et d'après des taux de fécondité, de mortalité et de migration nette. Les données ont été manipulées à l'APL. Pour 1985, la Projection A (population permanente) prévoit 57,355 personnes et la Projection B (population courante) 67,037, soit un accroissement annuel de 3.2 pour cent. Suivant ces projections, 1 - les Inuit et les Dene d'une part, et les "Autres" d'autre part vont continuer à former environ 50 pour cent de la population totale mais la minorization Amerindienne est déjà bien installée dans la partie Moyen Nord des Territoires. 2 - Un accroissement considérable des adultes. 3 - Les taux de dépendance générale va s'améliorer de 8 points. 4 - La concentration dans des localités de plus de 750 habitants va continuer, d'où le besoin de nouveaux "villages" au plan municipal. 5 - Suivant la Projection B, il faudra trouver 5,000 nouveaux emplois pour l'ensemble des TNO et un autre 5,000 dans le cas où les Amérindiens acquiérent un faciès de participation à la main-d'oeuvre et un taux de non-chômage comparables à celui des blancs.

Au nombre des 30 suggestions, notons un développement planifié à composante démographique, un plus grand respect de la polyethnicité originale des TNO, la diminution du nombre des personnes flottantes (106,000 entrées 1962 et 1977), l'accroissement des responsabilités des résidents à l'échelle locale une légère augmentation du nombre des députés fédéraux et territoriens, enfin, des recherches sur des problèmes spécifiques.

ABSTRACT

This study of N.W.T. population trends has a threefold purpose: to understand the recent demography (total population 46,386 in January 1978), to project the situation up to 1985, and to draw up some recommendations.

Having noted the inadequacy of existing data, but allowing for the usefulness of pilot studies, we have distinguished the "permanent" and "current" populations, identified classes of settlements and of transient people, as well as suggesting new concepts of analysis. Study of the current N.W.T. population for 1966 to 1976 shows that 66 per cent of the total increase has been natural increase. Nevertheless, the yearly change is very uneven, having declined from 2,706 in 1970 to only 510 three years later. Greater Yellowknife (population less than 10,000), which absorbed 63 per cent of the territorial net migration during 1966–1976, is still dominant, reflecting the benefits of centralization.

Making projections is an adventure, determined to a large extent by the influence of outside factors. We have followed the component method, according to novel assumptions. Data were processed through the APL system. For December 1985, Projection A gives 57,355 "permanent" northerners with a yearly average rate of increase of 3.21 per cent. Projection B indicates, for June 1985, 62,037 "current" people. Both projections show a great increase of individuals of working age. Relatively more effort will have to be made at the secondary school level than at the primary stage. The crude dependency ratio will lose 8 points from 1977 to 1985. The almost nose-to-nose position of "Others" vs. native people remains as a characteristic (estimates were made before Métis census figures were available). The moderate popularity of the "Back to the Land" movement may lead to more small settlements. Also, there is a clear trend towards a concentration of population in settlements of more than 750 people, according to data from Projection B. The N.W.T. will need more new "villages" than any other municipal category. Up to 1985, there will be 5,000 new jobs required for all ethnic groups, taken together, if the present labour structure persists, and another 5,000 jobs if native people, in particular, are to have a rate of participation and a level of employment similar to those of southerners.

Among thirty recommendations are the following:

a. to encourage the recent trend shown by the Legislative Assembly of becoming involved in planning, and it is hoped, in integrated planning, with population as the main consideration;

b. to ensure that planning must conform to the factual ethnic situation in the Territories, with its political, social, cultural and economic consequences;

c. that the proportion of transient people to the general population is great (in-migrants and out-migrants of approximately 106,000 between 1962 and 1977) and ought therefore to be subject to some kind of regulations;

d. to urge development of local responsibilities;

e. to propose that the numbers of MP's and MLA's be slightly increased; and

f. to undertake more applied research on specific demographic problems.

ELOAKHIHINAUTIKHAK

Ona kaujihautauyok Nunatiamiun kanuk amigatigiyakhainun emanaiyutikakman pingahuplutik emanatun" taimali tahamna kangihimaplugu talvaujumun tahapkuan amilganin tahamanitun (emana amilgatiginin 46,386-gumata Janoary, 1978), tahamna kauyihaktaunikaktuk 1985-mun tikiplugu, taya iluakhakta.

Tahamnali ilitugigaptigu talva kaujihaktauhimayun namatiaginmata kihianikliktauk pitakatukhaukmikman nakuyunik utugautikhanik, elitughimaligaptiguli tahamna kiklianun taif umunalu amigainiuvaktun, elihimajauplutik tahapkuan nunalgit kanugitunin tahapkoalu oklaukpaktun, amalutauk tahapkuan nutan kauyihaktauhunguyun tahapfumungan. Tahapkuatli kaujihakttauyun nakuyunahuakhutik Nunatiamiun amilgaknin okiun kulit kangihimaniktiplugin 66%-min amilgakhigihimayun . Tanaikaluaktilugu, tahapkuan ukiuktaman amilgahivalianin hunikpakmata, huklu, 2,706-nik amilgakhivalikmata 1970-mi 510-nik amilgakhivaligilutik ukiun pingahun natiplugin. Tahamanili Yalonaimi (amilganin amigaikiyauyun 10,000)-nik, imana tahamna tikivivaknikhaugami 63%-mik Nunatiami kulit ukuan atulitun okiun atuliktiplugin, huli amilgakiyan amihumik, tahamna tanaiyutikaktuk kitianinianun.

Tahamna kaujihaktauyuk hivunikhaptinun, tahamna ilituginakpuk kanugiliuktukakpalianianun kaplunan nunani. Tahapkuan malikpakaptigin imana atuktauvaktun, tahapkuan malikpakgugin titigakhimayun. Tahapkuan nahaktaunikuinun ilihimanaknikakmata. December-mi 1985-gulikan, ihumagiyauyuk imana amilgaktiginiagiagita 57,355 tahamaniginaktukhan ukiuktaktumiun imana ukiumi atauhikmik amilgakhigiakpaklutik 3.21%-mik. Tamna ehomagiyauyuk B-mituk emanaiman, June,1985-mi 62,037-uniagiagita taimaiginauhinut inuin. Tamakmik tahapkuan ihumagiyauyun kangihimanautikakpun hivuniptini amigailigunaktut havaliktukhat. Taimali tahaphuma tannainianun tahamna ikuknik iluakhakhimafaktukhak. Tahamna tanainia ahivaknikakniakman 8%-mi 1977-85-mun. Tahapkuatuk Kaplunan kaplunagugitutlu amilgaktiginin kauyihaktauyut (tahapkuan kauyihaktauhimayugaluin taja kaplunagayun.) Amalitauk taima nunanun utikpalianin tahapna nunaliknik ikilikaivalianiakman. Tamaptauk, tahapkuan kauyikhaktauvaliakmata tahapkuan amigainin nunalgin inulgin amigaikiyanik 750-nin, tahapkuan malikhugin nahaktauhimanin talvani B-mi. Tahamani nutanik nunatiami Village-kalikpalianikukmata ahianik imana atiniktaulutik nunan. Tikilugu 1985, imananik 5,000 nutanik havakhakagiakakniaktuk tamainun kaplunanut iitkiliknut inuknutlu, kativlugit tapkuan taimali talva havakniuvaktuk tana hunikniangitpan 5,000 nutanik tahapkununga kaplunagugitunun, piluaktumik, imana elauyukatiapakuplugu amalu taimatainak kaplunat nunanititut havaktukhaukpata.

Okuan 30 ilagigain atuliktaukuyakun

a. tahamna atukaulikpalilikuplugu nunatiami katimayikyuankita atuliktaukuya atuktaulikan, tana ihuaktuhugigaptigu, iluakhaktauvalianiа tahamna amigaillikpalianin inuin maliktukhaukman.
b. Taman akisutauvalianiа malitiakuplugu tamainun atjikigitunun atuktauyunaknikatiakuplugu nunaptingni, gavamanun, inuhikmun, ilipkuhikmutlu tahamunga havakaknikmun.
c. amalutauk tahapkuan ulagaktakpaktun kikutuinain amigaipalakpakmata (humigakhimayum humutuinakpaliayutlu emana amilgatigimata 106,000 pigialutik 1962 1977-mun) amalu tahamna piplugu taimainia pikuyamik iluakhiyukaktukhak.
d. tahapkuan pivaliayun kihutuinain nunaliknun ataguvikalikpalikuplugin.
e. tahapkualutauk amilgakhititauvalikpakuplugin Atowamitun katimayin nunatiamilu, talvalu
f. tamatumingan ataguvikaknikhautitauvaklutik tahamna paplugu amilqahivalianik.

Tamana tuglia pingayuatlu ilait titigaktauhimayun piyutikakpalaktun amigailiniaktunik 1985-mi. Kauyihaknikhak tahamna hivuliuyauyakaktuk. Atugaukuyauyun tapkuan A B-lu ukauhikaktun amigahivalianiknik, tahapkuan inuin amilgakhivalianinik havaniklu.

Tamna kingulikpak ukauhikaktuk malguknik atugaulikuyauyuknik, tahapkuan 30-uyun titigakhimayakun atugaulikuakun, tahamna ikayutiakugaluakpavun tamatumungan atutiakuplugu.

November 15, 1978 L.E. Hamelin

ᑕᐃᒪᓐᓇᐃᑦ ᓄᓇᕗᑦ

ᐅᓐ ᖃᐅᔨᓴᖅᑕᐅᓂᖅ ᓄᓇᓕᒻᒥᐅᑦ ᖃᓄᐅ ᐊᑐᐊᓕᓴᐃᓐᓇᖅ ᓄᑦ ᐃᓕᓐᓂᐊᓐᓂᖅ ᐱᖁᔭᓐᓄᑦ-ᓴᓕᓐᓂᐅ ᓴᓐᓂᐅ: ᑕᐃᒪᓕᑦᑕᐅᓐ ᑕᓕᓐᓂ ᑐᑭᓴᓕᓕᒫᓂᐅ ᓕᓐᓂ ᐃᓕᓐᓂᐊᓐᓂᖅ ᑕᓕᓐᓂ ᑯᐊ ᐊᑐᐊᓕᓴᐃᓐᓇᖅᑐᑦ ᑕᑎᓪᓗᒍᑦ (ᐃᓕᓐᓂ ᐊᑐᐊᓕᓴᐃᓐᓇᖅᑐᑦ 46,386-ᓗᒃ LC ᑲᓇᐃᑎᒥ, 1978), ᑕᓕᓐᓂ ᖃᐅᔨᓴᖅᑕᐅᓂᖅᑕᐅᓚᐅᖅᑐᓂᖅ 1985-ᒧᑦ ᑎᑭᓐᓄᑦ, ᖃᓄᐅ ᑲᓇᑕᒥᓇᑦᑕᓂᖅ ᓄᓇᓕᒻᒥᐅᑦ ᐊᑐᐊᓕᓴᐃᓐᓇᖅᑐᑦᓂᐊᓕᒫᓂᖅ ᓴᓐᓂᐅ.

ᑕᓕᓐᓄᑦ ᖃᐅᔨᓴᖅᑕᐅᓂᕐᓂᑐᐃᓐᓇᖅᑐᓂᖅ ᐊᓐᓂᒪᑦᑕᓂᖅ, ᑭᓇᐅᔭᓂᑦᑕᐅᓐ ᑕᐊᒪ ᐱᕕᖃᓕᓴᐅᑎᓪᓗᒍ ᐅᑉᑐᓂᒃᑯᑦ ᐱᓕᕆᔨᒃᑯᓂᖅ ᐱᕕᖃᓕᓴᐅᑎᓪᓗᒍ, ᖃᓄᐅ ᑕᓕᓐᓂ "ᑕᐊᒪᓐᓇᒧᑦ" ᖃᓄᐅ "ᑕᐃᓐᓇᓕᓂ ᑲᓂᓪᓚᑦ" ᖃᓄᐅᓂᐅᑦᑐᓂᖅ, ᖃᓄᐅᓕᕆᔨᒃᑯᓂᖅ ᓴᓐᓂᐅ ᑕᓕᓐᓂ ᐊᑐᐊᓕᓴᐃᓐᓇᖅᑐᑦ ᓄᓇᕗᑦ ᖃᓄᐅ ᑕᓕᓐᓂ ᐊᑐᐊᓕᓴᐃᓐᓇᖅᑐᑦ ᓴᓇᔨᓂᖅ ᐊᑐᐊᓕᓴᐃᓐᓇᖅᑐᑦᓂᐊᓕᒫᓂᖅ ᑕᓕᓐᓂ ᐊᑐᐊᓕᓴᐃᓐᓇᖅᑐᑦ ᓄᓇᕗᑦ ᖃᓄᐅ ᑕᓕᓐᓂ ᐊᑐᐊᓕᓴᐃᓐᓇᖅᑐᑦ ᓄᓇᓕᒻᒥᐅ

Di N.W.T. ndéhé k'eh dene ke ?óné chu ts'ę chu dágot'ı sóoni keoduuzhá genidhę. Dahsíı tai keoduuzhá genidhę:

Łié t'áh dene dánéht'é chu dene ełendahch'á chu dááts'eneéht'é káats'ede?a keoduuzhá genidhę. It'áh dúh January 1978 k'eh dene 46,386 dene ełendahch'á káde?a kanéht'é gúlı keogedıhshǫ.

Okıı t'áh 1985 gots'ę dágóot'é ésíí keoduuzhá genidhę.

Taa t'áh dágóot'ę ésíı goséniendigıhthi.

Yuníe chu dúh chu dágot'ı ésíı séé nezu gogheh keots'edıhshǫ le láondíh. Séé dágot'ı keodıízhǫ le égúh kúlú dahsía keots'ededí?ǫ t'áh káa keodıízhǫ gha got'áodé?á olí

Dene di ndéhé k'éh nádéh ésíı gots'ęh mék'ehodhc ésíı chu káa łahk'aa gioduúzhǫ aoóthídleh gha. Kǫ́ę taonét'e dene ełendahch'á nádéh chu gots'ęh amíi mék'ehodhe ésíı dene dáondíh yaoílı ésíı chu keodıízhǫ gha. It'áh séé dágondíh keodıízhǫ gha góghǫlaída gha.

Yundée hóno zaye gots'ęh N.W.T. zhíe dene dágodéhtł'íı ?óné ajá káa keodıízhǫ. Ezhı t'áh dene łíelatth'óno t'aónét'é ?óné ajá gots'ęh ehts'ętaóno ?ǫ́ǫ́ ehts'ętai dezǫą megúlı ǫt'e. Kúlú zaye taonét'e ki elégo?ı le. Dla 1970 k'eh 2,706 ?óné ajá kúlú 1973 k'eh kí 510 zǫ ?óné ajá. Kúlú Yellowknife godhąą azhǫ́ t'áh dene 10,000 k'ea?ih gúlı kúlú yundée hóno xave gots'ęh móla ndéhé k'eh gots'ęh dánéht'é di ndéhé k'eh gots'ę agejá ésíı tanı ?ǫzé Yellowknife gots'ę éléh. Kaondíh t'áh dahsíı azhǫ́ łáıt'é agot'ı láondíh t'áh dene azhǫ́ ghagot'áodé?á t'áh Yellowknife k'áh Yellowknife k'áhla kǫ́ę gondehdhé á agúht'e.

Kek'éodejo agots'ele gha kekl'éodejǫ gha chole. K'eodeko agúht'e t'áh dágondeh gha sóoni kek'éodejǫ chole. Kúlú holǫ gok'aagodıí?ę gha ezhı t'áh odı gonezu ésíı k'ǫ́ę athídeh gha. It'áh ágondeh gha ésíı computer t'áh tth'íots'enéhsa gha gok'aagodıí?ę gha. December 1985 enidé dene 57,355 dene anéht'é dúhdǫę ndéhé keh nádéh gha computer ghaádé kagondí gha olí sóoni inıíddhę. Gots'ęh chu computer ghaádé June 1985 énidé ǫ nádéh chu mék'ehodhe ésíı chu aıhla t'áh 62,037 dene agondeh gha sóoni. Ezhı t'áh dene ǫ nádéh chu mék'ehodhc ésíı chu ekúh enidé dene dúle eghálagenda lǫ agondeh gha. Ekúh nıónıdhe énidé dene duhdǫę nádéh ésíı ké?ǫ́ǫ́ edeht'éh ghágondetę gha gó?ǫ. Kaondíh énidé zǫ ésąą dúle móla k'ǫ́ę eghálats'enda. Ekúh nıonıdhe énidé 1977 gots'ęh 1985 gots'ę dene denc t'á enidıh?a ésíı łǫ le agondeh gha. Ekúh nıonıdhe énidé vunaa nídéh ésíı chu ǫ nádéh chu eléneht'é eghálagenda olí sóoni. Kadıídi kúlú dene saámba mewǫzha le ésíı kí dágeneht'é k'áhla keots'edıhshǫ le.

Dúh dechıtah anaúdeh yáts'edi t'áh edaeǫ dúh go?ǫzę kǫ́ę vágóla łǫ agondeh gha sóoni. Kǫ́ę yágóla ésíı dene k'é?ǫ́ǫ́ anéht'é gha olí sóoni computer ghaádé indıíddhę. N.W.T. zhíe k'é?ǫ́ǫ́ kǫ́ę yágóla gok'oni łǫ ts'enidhę gha sóoni.

Ekúh 1985 nıónıdhe énidé k'áhla dúh gok'ǫ́ę eghálats'enda gha énidé k'ach'u eghálaeda 5,000 gúlı gha sóoni computer ndi. Gots'ęh chu dúhdǫę dene ke vunaa nídéh k'ǫ́ę eghálaúdá genidhę énidé k'áhla eghálaeda 5,000 ts'enidhę olí sóoni computer ndi.

It'áh kagondíh énidé dıı dahsíı ehts'ętai ghǫh guúdeh gha:

a) Di amíi kagóot'é ndi ésíı dágondíh énidé dene gha gonezu olí gondáh kats'edi gha gots'ęh dene łǫ agondeh dhede dágóot'é ts'enidhę ésíı segots'eleh gha gó?ǫ.

b) Dúh di N.W.T. zhíe dene tah dágondíh ésíı gok'ǫ́ę gogheh gots'endeh gha chu dágondíh énidé ts'enidhę chu, dla Government gha dágondíh chu dáondíh chu dáondíh dene yáts'ılé chu, dágondíh dzene táonét'e gots'endíh chu, gots'éh got'áh ts'enda chu gok'ǫ́ę odı kágondíh énidé gonezu olí ts'enidhę gogheh gots'endeh gha.

c) Yunaa dene nídéh ésíı ǫ nádéh ésíı ?ǫzę anéht'é agújá it'áh k'e?óné łǫ andeh ch'á gok'ehodí énidé nezu.

d) Kǫ́ę yágóla táonét'e dágondíh eghálaeda énidé dene azhǫ́ kehoedih énidé gonezu olí godi.

e) Dene ts'ádadendi dene ts'áohndí enidhę ésíı vazea k'é?ǫ́ǫ́ anaodéhtse énidé nezu.

f) Dene tah dák'eodéke k'é?ǫ́ǫné keots'edihshǫ gha gogháláudá godi.

TABLE OF CONTENTS

	Page
ABSTRACTS	
French	ii
English	iii
Western Eskimo	iv
Eastern Eskimo	v
Slavey	vi
TABLE OF CONTENTS	vii
LIST OF TABLES	viii
LIST OF FIGURES	ix
NORTHERN ZONES OF CANADA (map)	x
OBJECTIVES AND OVERVIEW	xi
ACKNOWLEDGEMENTS	xii
I. SHORT REVIEW OF THE N.W.T DEMOGRAPHIC SITUATION, 1961-1978	1
A. Data and studies	1
a. Inventory and contribution	1
b. Inadequacy of documentation	1
c. Terminology	2
B. The number of northerners	3
a. The Canadian North and the N.W.T., 1881-1976	4
b. Permanent population, N.W.T., 1956-1976	5
c. Current population, N.W.T., 1966-1976	5
Example of Hay River	
d. The N.W.T., 1976-1978	8
II. DEMOGRAPHIC PROJECTIONS, N.W.T., 1976-1985	9
A. Methodological considerations	9
B. Projections	12
a. Projection A. Basic Data. Total population	12
b. Projection B. Basic Data. Total population	16
III. MAIN IMPLICATIONS FROM THE RECENT SITUATION AND FROM PROJECTIONS, 1961-1985	20
A. General evolution up to 1985	20
B. Territoriality	20
a. Sizes and classes of settlements	20
b. Middle North and Far North zones	22
c. Centrality: Yellowknife	23
d. The "Back to the Land" program	24
C. Ethnic distribution within population	26
a. The recent situation	26
b. From 1976 to 1985	27
D. Sex and age	28
a. Sex ratio	28
b. Categories of age	29
c. Dependency ratio	30
E. People at school	31
F. External migration	32
a. Ethnic distribution, timing and magnitude of migration	32
b. Age and origin of migrants by region	32
c. Perspectives to 1985	33

G. Manpower 34
a. Basic concepts relating to the 1967-1971 situation 34
b. Labour force up to 1985 37
H. Housing 1975-1985 38

IV. RECOMMENDATIONS 39
A. To politicians 39
B. To researchers 41
C. Mental attitudes 43
CONCLUSION 43
FOOTNOTES 44
SHORT BIBLIOGRAPHY 47

APPENDICES 50
A. Glossary 50
B. Selected series of data 51

LIST OF TABLES

Number		Page
1.1	Number of inhabitants in 1976 according to various N.W.T. sources	2
1.2	Data, population terminology and interpretation, N.W.T.	3
1.3	Population and annual change, N.W.T. and Canada, 1941-1976	4
1.4	Permanent population of northern Canada by Provinces and Territories, 1971	5
1.5	Evolution of the permanent population, N.W.T., 1956-1976	5
1.6	Current population, growth factors, N.W.T., 1966-1975	6
1.7	Vital statistics, N.W.T., 1966-1975	8
2.1	Projected permanent population, N.W.T., 1976-1985	12
2.2	Projected permanent population, N.W.T., 1976, by age, sex and ethnic group	12
2.3	Projected permanent population, N.W.T., 1977, by age, sex and ethnic group	13
2.4	Projected permanent population, N.W.T., 1978, by age, sex and ethnic group	13
2.5	Projected permanent population, N.W.T., 1979, by age, sex and ethnic group	13
2.6	Projected permanent population, N.W.T., 1980, by age, sex and ethnic group	14
2.7	Projected permanent population, N.W.T., 1981, by age, sex and ethnic group	14
2.8	Projected permanent population, N.W.T., 1982, by age, sex and ethnic group	14
2.9	Projected permanent population, N.W.T., 1983, by age, sex and ethnic group	15
2.10	Projected permanent population, N.W.T., 1984, by age, sex and ethnic group	15
2.11	Projected permanent population, N.W.T., 1985, by age, sex and ethnic group	15
2.12	Projected current population, N.W.T., 1976-1985	16
2.13	Projected current population, N.W.T., 1976, by age, sex and ethnic group	16
2.14	Projected current population, N.W.T., 1977, by age, sex and ethnic group	17
2.15	Projected current population, N.W.T., 1978, by age, sex and ethnic group	17
2.16	Projected current population, N.W.T., 1979, by age, sex and ethnic group	17
2.17	Projected current population, N.W.T., 1980, by age, sex and ethnic group	18
2.18	Projected current population, N.W.T., 1981, by age, sex and ethnic group	18
2.19	Projected current population, N.W.T., 1982, by age, sex and ethnic group	18
2.20	Projected current population, N.W.T., 1983, by age, sex and ethnic group	19
2.21	Projected current population, N.W.T., 1984, by age, sex and ethnic group	19
2.22	Projected current population, N.W.T., 1985, by age, sex and ethnic group	19
3.1	Demographic evolution by classes of settlements, current population, N.W.T., 1961 and 1977	21
3.2	Estimates of population by classes of settlements, current population, N.W.T., 1985	22

3.3 Comparison of settlement situation, N.W.T., 1977-1985 22
3.4 Population by zonal divisions: Middle North and Far North, N.W.T., 1977 and 1985 23
3.5 Demographic evolution, current population, Greater Yellowknife, 1966-1976 24
3.6 Evolution of the Outpost Camp Program, N.W.T., 1975-1980 26
3.7 Current languages, adult population, main settlements, N.W.T., 1975 26
3.8 Ethnic composition, current population, N.W.T., 1966-1975 27
3.9 Ethnic composition, permanent population, N.W.T., 1976-1985 28
3.10 Ethnic composition, current population, N.W.T., 1976-1985 28
3.11 Sex ratios, permanent population, N.W.T., 1931-1985 28
3.12 Variations in categories of age, permanent population, N.W.T., 1951-1976 29
3.13 Categories of age by ethnic group, current population, N.W.T., 1977 29
3.14 Categories of age by ethnic group, current population, N.W.T., 1985 29
3.15 Variations in categories of age by ethnic group, current population, N.W.T., 1977-1985 30
3.16 Evolution of the crude dependency ratio, current population, N.W.T., 1977-1985 30
3.17 School age population, school enrollment and number of teachers by ethnic group, N.W.T., 1985 31
3.18 Change in student enrollment in N.W.T., schools by per cent between 1976 and 1985 32
3.19 Origin by region of new registrants, N.W.T., 1975-1977 33
3.20 Age of new registrants, N.W.T., 1975-1977 33
3.21 Employment estimates by categories of work, N.W.T., 1967 and 1970 34
3.22 Seasonal unemployment of male labour force in six Mackenzie settlements, 1971-1972 35
3.23 Relative places occupied by native people on the labour market, N.W.T., 1970 36
3.24 Tentative evolution of labour profiles by ethnic group, N.W.T., 1967 and 1970 36
3.25 Distribution of labour supply by classes of age, N.W.T., 1976 37
3.26 Labour supply, N.W.T., 1977-1985 38

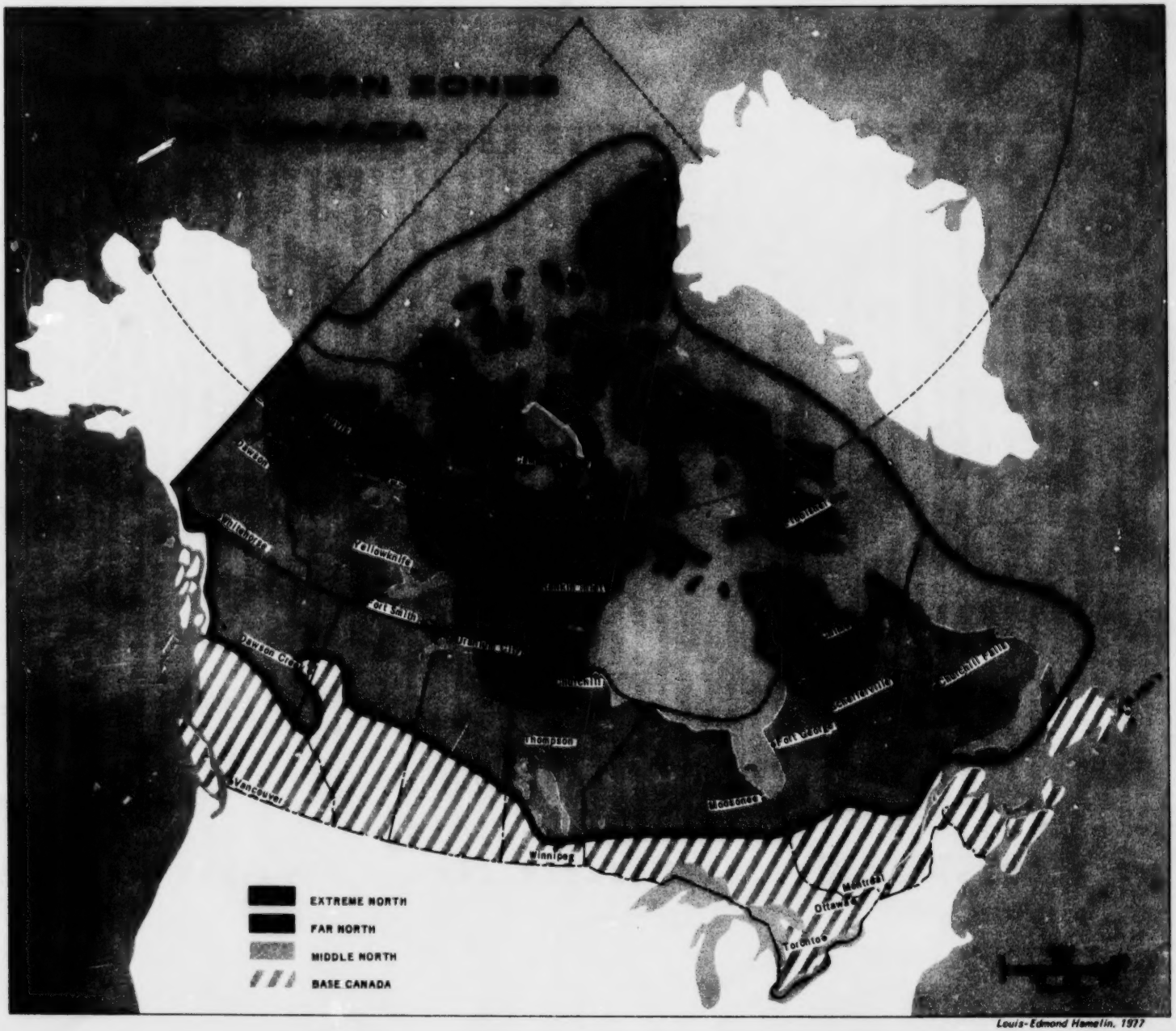
Appendices **Page**

C-1 External migration, N.W.T., and Yukon, 1962-1976 51
C-2 Distribution of family median income, districts and groups of communities, N.W.T. 1970 51
C-3 Populated places, N.W.T., 1978-1986 52

LIST OF FIGURES

Number **Page**

1.1 Average rates of increase, permanent population, Canada and N.W.T., 1941-1985 6
1.2 Growth factors, current population, N.W.T., 1966-1978 7
3.1 Number of inhabitants by classes of settlements, current population, N.W.T., 1961 and 1977. By percentage 21
3.2 Categories of age, N.W.T., 1951-1985 29



Louis-Edmond Hamelin, 1977

OBJECTIVES AND OVERVIEW

At its inception in 1976, the Science Advisory Board of the N.W.T. quickly realized the major impact a population increase of around 5 per cent per year might have in the Territories. Comprehensive terms of references for a demographic study were being drawn up. Letters and direct talks have brought to me more information about the research project. Knowing that population studies may be at the centre of many aspects of politics, that northern data are often inaccurate, and that other major demographic projects are on the way, I was reluctant to accept the challenge. In a letter dated July 8, 1977, I wrote that a research of that kind should take "a couple of years". Fortunately, I was told that this survey was not intended to duplicate the ongoing researches. The objective was to produce a "simple paper", using data accumulated by different centres and, then, from original documents thus collected and with some original research, to "draw appropriate conclusions". I understood that time should be limited and that I would not have to cover all aspects of N.W.T. population. Contract CT 771736 was signed at the end of September 1977. Later I was asked by the Executive Secretary to the Board, B. A. Hubert, to have a specific look at the "Back to the Land" program as well as other matters. The inadequacy of available statistics and demographic knowledge has prevented me from undertaking a specific study on health conditions.

The first two tasks were to learn what had been done before and to be prepared to make territorial population estimates for around ten years. For that purpose, in October, 1977, I went to Yellowknife, Ottawa, and Montreal and communicated by letter to thirty individuals as well as institutions like the Department of Indian and Northern Affairs. Reports and data logs about three feet deep have been collected, and they form the basis of this report. I received full cooperation from all people concerned, particularly territorial administrators. As far as demographic predictions are concerned, some assumptions of my predecessors have been slightly modified to cope with a non-pipeline situation.[1] Data have been processed through the APL computer system at l'Université Laval by G. Plante, professional engineer. A graduate student in geography, D. Saint-Maurice, has worked on the project as assistant. Comments made by members of the Science Advisory Board of the N.W.T. and by referees on our drafts in January and April were most useful.

The following report includes more than 50 tables in its four chapters. The first represents a review of the territorial population from 1961 to 1978. Available data and previous studies were considered in the context of recent territorial evolution. A better understanding of the existing situation was seen as a prerequisite of projecting into the future. We soon realized that present demographic characteristics were not sufficiently well known.

The second and third parts of the report deal specifically with population estimates for 1985. Methodological considerations first appear. Projections A and B concern total population, vital characteristics and socio- economic aspects.

The last chapter presents two groups of recommendations, about thirty suggestions in all, in the hope that they will help determine policy.

Louis-Edmond Hamelin

April, 1979

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Larochelle, G., Québec		x	x				
Laurencelle, U.J., Ottawa		x					
Légaré, J., Montréal	x	x	x				
McDermit, R.E., Yellowknife	x						
Milligan Shirley, Saskatoon							x
Mougeot, L., Saskatoon	x		x				
Murphy, Dan, Yellowknife	x		x	x			
Native Council of Canada, Ottawa	x						
Normandeau, L., Québec		x					
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Savoie, D., Ottawa	x	x	x				
Solandt, O.M., Bolton		x		x			
Sparham, R.D., Yellowknife	x		x				
Stabler, J.C., Saskatoon		x	x				
Stevenson, W., Yellowknife		x	x				
Stewart, D.L., Yellowknife	x	x	x	x			
Van Toever, D., Ottawa	x		x				
Villeneuve, P.Y., Québec		x					
Villiers, D., Ottawa	x	x	x				
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CHAPTER ONE

SHORT REVIEW OF THE N.W.T. DEMOGRAPHIC SITUATION, 1961-1978

DATA AND STUDIES

Items appearing in the bibliography and in footnotes indicate that some demography data and population reports on the Northwest Territories are readily available.

INVENTORY AND CONTRIBUTION

One might mention four main categories of data: a. the national *Censuses*; b. a fast-growing sector of what we called "N.W.T. Home Statistics", collected in the North by the territorial administration;[2] c. specific data organized under the responsibility of federal agencies, such as the *Department of the North*[3], *Statistics Canada* or Commissions and Inquiry; d. multiple accounts made by individual researchers on problems or regions.[4] Native groups are adding a fifth category by organizing their own systems. There exist, in addition, a *Northwest Territories Statistical Abstract* and a *Canada North Almanac*.[5]

As far as we know, a complete list of all data pertinent to northern population studies does not exist. Fortunately, compilation and evaluation of some basic data are presently under way.[6] An overview of the state of territorial demographic statistics has been made as well.[7]. A Committee on Northern Population Research, situated in Montreal, has been set up in 1976-77, and a workshop was held. A *Northern Population Bibliography-Canada* has just been provided.[8]

One of the difficulties with northern statistics comes from the phenomenon of undercounting, which affects almost all sources: *Census*, the *Health Care Plan*, *Reports on Health Conditions*. One cause of northern undercounting made by national *Census* comes from the priority given to the southern address when either an individual or a firm exercise their activity in both the North and in the South; to avoid double counting, these data are registered only at the head office.

Specialists have used the northern statistics to prepare specific population reports. A general review has been published.[9] Important studies were written by R.M. Bone,[10] C.-M. Lu and D.C.Emerson Mathurin,[11] J.Palmer,[12] and J.Reid.[13] Research falls into five categories: a. There are a few studies which try to cover the subject as a whole. b. After 1968, the prospect of a Mackenzie Valley pipeline led to many researches concerned with labour demand.[14] c. Most N.W.T. population studies discuss specific situations such as health,[15] housing, cost of living, incomes, education,[16] social aspects,[17] municipal status and services. d. A special category is set up by "area economic surveys"[18] which contain pertinent demographic material. e. Finally, many researchers have studied the native people but those people are trying to control their findings, reserve it for themselves and undertake their own research.[19]

Without taking into account short papers or notes published in sundry periodicals, well over 100 reports or studies exist which concern the N.W.T. demography. Can these data and studies provide a sound basis for projecting?

INADEQUACY OF DOCUMENTATION

There is one subject on which all researchers agree: the inadequacy of data. Such a shortage has impeded demographic research, these being comprehensive or specific. We endorse the following opinions: "Commencing a general study would not be possible until the problem of an adequate data base is resolved and some micro or regional monographs are completed." [20] Every field suffers from inadequate statistics. Concerning infant mortality before 1960, there is a "real lack of quality in the registration"[21] The excessive effect of random rounding inside enumeration areas has been noted by R.M.Bone. Moreover, someone has stated that "the small and scattered population of northern Canada is subject to a much greater range of error than the national population. This argument rests on a combination of geographic and cultural factors unique to the North. Such factors would include the difficulty of access to some settlements, the cultural and linguistic differences found in the North, the highly mobile nature of some northern peoples and the transient character of the white work force"[22] Socio-economic statistics are not any better. In one economic study, the authors complained that "expenditure patterns are not reliably documented"[23] As far as migration is concerned - a second factor in populating the Territories - one researcher has recognized that "migration is by far the [component] least susceptible to anaylsis, largely because basic statistical data are poor or non-existent".[24] The same author writes further on that "housing forecasts become little more than speculation". To quote another report on the shortage of data on northern demography: "We discover much to our chagrin that there was not that much relevant data to work with".[25] The matter of statistical quality has been echoed in the Legislative Assembly of the Northwest Territories. One Member complained on the "odd way [Canada] determines who is employed and who is not" but without any comment on how to improve the collecting of data.[26] Suggestions for correcting the situation have been pointed out.[27]

Facing those statistical shortages, the most logical steps

would have been either to work exclusively on the data themselves, or not to undertake studies until better research tools were available to us.

TERMINOLOGY

The uncertainty of quantitative documentation may be seen with reference to even the most basic data: e.g. the total population of the N.W.T. for any year. Let us take 1972, for which we have at least the choice of 34,807 (34,805), 35,000, 35,069, 37,565, 38,722 and 41,148; the maximum difference amounts to 18.2 per cent. Table 1.1 gives another example taken for 1976; seven totals may be found; the range between lower and higher figures making 20.4 per cent. No one is happy with these large variations. Two reasons for these discrepancies are the usual undercounting by national *Census*, and the double counting (or the counting of temporary people as permanent residents) made by some N.W.T. agencies. Any observer will note that the fact of choosing one basic datum over another produces changing demographic rates which, in turn, influence the slope of our forecast (see Table 1.7). we have tried to throw some light on the problem of multiple data for the same phenomenon and for the same year. Table 1.1 looks at values given for the total N.W.T. population in 1976. Interpretation of these parallel data led us to develop concepts of "permanent" population (being in present statistics either "low" or "average"), and "current" population ("low", "average" or "high"). Table 1.2 tries to go further and comments on the accuracy of data coming from official sources that concerns our own projections.

TABLE 1.1

Number of inhabitants for 1976, according to various N.W.T. sources*

Number of inhabitants	Differences from the lowest figure (%)	Sources	Interpretation
39,358		*Report on Health*, 1976	Mid-year situation. Probable undercounting of permanent people. Considers residents of at least a year. Low permanent population.
39,869	1.3	*Report on Health*, 1976 + other sources	"Year-end" situation estimates. Probable undercounting of permanent people. Considers residents of at least a year. Low permanent population.
42,609	7.6	(Canadian) *Census*	Mid-year situation. Probable undercounting of some permanent people. Average permanent population.
43,154	9.6	Author's estimates	Census figure, at the end of the year (estimates). Used for Projection A to 1985. Average permanent population.
46,284	17.6	N.W.T. Home Statistics	Mid-year situation. Incorporates most of "monthly-transients" and people in unorganized settlements. Average current population.
46,500	18.1	Author's estimates	Mid-year situation. Incorporates most of "monthly-transients" and people in unorganized settlements. Used for Projection B to 1985. Average current population.
47,410	20.4	Author's estimates	Mid-year situation (estimates). Incorporates those who seem to have been left out of previous categories and some "weekly-transients". Tourists not included. High current population.
No data			All people at a given time. Maximum population.

*See Table 1.2, Appendix A (Glossary) and text.
By analogy, "permanent" population refers to *de jure* population and "current" population to *de facto* population.

At this point, one may legitimately suggest that more and accurate statistics be produced for any northern part of Canada (see Recommendations).

TABLE 1.2

Data, population terminology and appreciation, NWT*

Concept	Accurate figure	Approximate figure	Ranking*
Permanent population	None	In *Report on Health*	Low
		In *Census*	Average
		In our Projection A. 1976-1985	Low to average
Current population	None	In N.W.T. Home Statistics, for 1977	High
		In our estimates. 1966-1975	Average
		In our Projection B. 1976-1985	Average to high
All population	None	None	

*See Glossary in Appendix A.

*See Table 1.1 for quantitative examples at a given time.

THE NUMBER OF NORTHERNERS

Even if some data are approximate, and specific studies fail to cover the subject of the N.W.T. population taken as a whole, these documents and our input permits us to contribute to the recent history of the population of the North.

This section will appear naive to any person ignorant of the state of demographic statistics in the North.[38] As far as the remote past is concerned, the total number of northerners constitutes a non-existent statistic, and perhaps it may never be established. Population figures prior to the last century are practically unknown. Certain characteristics of the past population can only be surmised: e.g. the great age of certain occupations; the major migrations (penetration into the boreal forest on the part of the Indians; transarctic movements by the Inuit); utilization at one time or another of almost the entire Canadian territory; catastrophic local decreases in population; and an overall slow demographic evolution. It is hard to define that precise moment when, pushing back into the past of the North, one should begin to speak in terms of prehistory, but it is apparent that Canadian authors, unlike their European counterparts, tend to consider the truly historical period as being very short.

It is difficult to establish the total population of the territorial North even during the historic period. One author who has paid special attention to this problem could quantify the number of Eskimos as "enigma".[39] The official census of 1921 records 3,269 Inuit, a figure which now appears to be too low. One has to wait until the years 1927-1931 to obtain a more accurate accounting of the inhabitants of the Far North. It is probable that even in 1941 many Indians and whites were either overlooked, or else were recorded as inhabitants of settlements along the boundary of the Territories. We adopt the hypothesis that the native population of northern Canada decreased during the first centuries of white penetration, and remained scattered over a wide area. Statistics on features such as excessive mortality rates due to epidemics, major hunting migrations (i.e., rather abrupt depopulation or repopulation), biological mixing with visitors (whalers, explorers) are practically unknown. Our objective is to advance existing knowledge by evaluating recent past populations (an elementary, but hitherto insufficiently documented, aspect of northern demography) in spite of the scarcity of reliable data. The imprecision of some of the data should not prevent us from demonstrating certain trends and fluctuations in the peopling of the North.

What we want to do first is to present a demographic overview of the Canadian North during the last century. The Canadian North comprises both territories and part of seven provinces (see map). The total permanent population in 1971 was 292,702, of which the N.W.T. represented 12 per cent.

THE CANADIAN NORTH AND THE N.W.T., 1881-1976

In the Canadian North as a whole, the considerable growth in northern population comes as no surprise. During the last century the permanent population multiplied sixfold due to both natural increase and net migration. The Canadian North has been penetrated by immigrants of Canadian and foreign origin, but this northward trend has not been regular, either in time or space. One can, however, discern three periods:

a. The initial change began long before 1900. By the time of the census year, 1881, what was later to become the Province of Newfoundland-Labrador then contained more than half of the whites living in the North. During the period 1881-1911, the all-northern population grew at only a moderate rate, when one considers that the 30-year rate of demographic growth was only about 50 per cent. But by the end of the first decade of the twentieth century, there were isolated areas of 8,000 to 10,000 northerners (whites and indigenous people); in the Northwest Territories (Inuit); in the Yukon (the Gold Rush); in Manitoba (Indians with a rural economy); in Ontario (Indians); and in Quebec (the North Shore). But parts of Newfoundland and Labrador comprised the primary unit in terms of total northern population in what is now Canada.

c.1941-1976. Within this 35-year period, the rate of increase has not been at all uniform. Three facts emerge which allow us to distinguish the chronological pattern of the modern North. (i) The decade 1941-1951 was important from the military point of view, and a certain "prise de conscience." These factors did not result in a massive increase of residents except in the Yukon, which, by absorbing 4,182 newcomers, almost doubled its population. (ii) The five-year period 1951-1956 was fruitful, no doubt reflecting federal political organization, the exploitation of Middle North resources, and the beginning of the era of radar systems. (iii) During the following twenty years, average growth was held at more than 4 per cent (Table 1.3). Canada's North has been marked by the convergence of four structural factors, in part independent: high natural increase among indigenous people; government action; N.W.T. oil prospecting and development in provincial Norths. Table 1.4 shows that between 1941 to 1971, the rate of increase of the Canadian North taken as a whole was 3.46 per year, a figure lower than the one tabulated for the N.W.T. alone.

TABLE 1.3

Population and annual change, Northwest Territories and Canada, 1941-1976

	Northwest Territories		Canada	
Year	Permanent population	Average annual percentage change	Population	Average annual percentage change
1941	12,028		11,506,655	
1951	16,004	3.31	14,009,429	2.18
1956	19,313	4.14	16,080,791	2.96
1961	22,998	3.82	18,238,247	2.68
1966	28,738	4.99	20,014,880	1.94
1971	34,805	4.22	21,568,310	1.70
1976	42,609	4.48	22,992,604	1.32

Source: *Census.*

b. Only during the course of the twentieth century did penetration of the Canadian North as a whole become important. Between 1911-1941, the forces of colonization further modified the regional pattern. As a result of mineral exploitation and of agricultural developments along the pioneer fringe of Western Canada, the northern prairie provinces became the primary megaregion, incorporating 50 per cent of Canada's northern population (as opposed to only 22 per cent in 1911). Manitoba became the leading province in terms of numbers of northerners. The Yukon, by now deserted by prospectors, constituted the only political unit to register a decrease in population. The northern prairie provinces served as the main source of population for the Mackenzie, decades after (Table 3.19).

The Canadian North has been progressively invaded by people of diverse origins; this is particularly true of the Yukon. The indigenous people have thus become a minority. In the North as a whole their present proportion is equivalent to that which they occupied in Canada at the beginning of the nineteenth century. The Canadian North is experiencing, one hundred and fifty years later than southern Canada, a similar percentage phase-down of its native people; however, in the Northwest Territories, half of the population is still composed of indigenous people.

The North is always in the process of reorganizing itself; the various regions, while evolving according to peculiar patterns, nevertheless continue to reflect pan-Canadian combinations of circumstances.

PERMANENT POPULATION, N.W.T. 1956-1976

References to *Census* and *Report on Health* permit one to have an overview of the growth dynamics of the territorial population. During fifteen years (1961-1976), population has increased by 86 per cent — a much greater figure than that which Canada as a whole has registered (see Table 1.3). Of the 19,611 new northerners, 73.9 per cent are the result of natural increase. Figures for net migration which have originated here (Table 1.5) as a residual value of arithmetic calculation are somewhat higher than those collected by *Statistics Canada* from Family Allowances archives (Table 1.6).

CURRENT POPULATION, N.W.T., 1966-1976

For 1976, the N.W.T. Government in Yellowknife found that the official *Census* was giving too low a population figure with its assessment of 42,609. Northern administrators at the local level have reworked the data and produced instead a corrected figure of 46,284, a difference of 3,675 people, or 8.6 per cent. Such data could be called: "N.W.T Home Statistics." We began our study from these esti ates, completed to 46,500, to calculate the current population in those years prior to 1976. Our first undertaking, then, was to estimate a total population for December 31, 1975, which was found to be 46,286 individuals (1976 having registered a negative net migration). The second was to calculate a yearly set of population data prior to December, 1975. We had two series of yearly data available to us — one, which deals with natural increase, extracted from *Report on Health*, and the other, which gives net migration, whose values came from trans-provincial and trans-territorial changes in the places where Family Allowance cheques were cashed. Unfortunately, these last data are given for both territories (Table C-1). To determine the N.W.T. figure alone, we took two-thirds of the total, which is approximate only. For example, for the year 1975, natural increase was 999, and net migration 415, giving a balance of 1,414; the total population in the year before should have been 44,872. We proceeded in this way for every year back to 1965, when the population was 30,767.

TABLE 1.4

Permanent population of northern Canada by provinces and territories, 1971.

Political areas	Number in 1971	Change since 1941 (%)
Manitoba	70,920	72.5
Newfoundland and Labrador	52,629	148.4
Northwest Territories	34,807	189.3
Quebec	32,509	73.3
Alberta	28,696	80.7
Saskatchewan	21,821	97.7
Ontario	19,837	59.0
Yukon	18,388	274.2
British Columbia	13,095	86.3
Total	292,702	
Average		103.8

Source: Calculation made from *Census*, 1971. For the N.W.T., 34,805 is also given.

Appendix B gives a map of Canada which shows the northern area of every province. N.W.T. holds second rank for the total number of northerners by political unit, and third rank as far as increasing rate since 1941 is considered.

TABLE 1.5

Evolution of the permanent population, N.W.T., 1956-1976

Period at June 1	Population at the beginning (a)	Population increase	Natural increase (b)	Population at the end (a)	Net migration
1956-1961 (c)	19,313	3,685	3,331	22,998	354
1961-1966	22,998	5,740	4,659	28,738	1,031
1966-1971	28,738	6,067	5,029	34,805	1,038
1971-1976	34,805	7,804	4,816	42,609	2,988
1961-1976	22,998	19,611	14,504	42,609	5,107
1956-1976	19,313	23,296	17,835	42,609	5,461

Source: (a) Censuses, *Statistics Canada*, Ottawa.
(b) *Report on Health . . .*
(c) *Census* 1961, Cat. 99-511, Bull. 7.1-1, p. 33.

How should one interpret these new N.W.T. total current population figures? Let us consider three aspects:

a. First, the components. Natural increase data are a bit low, particularly among net (white) migrants; all those are not tabulated in vital statistics published in the *Report on Health;* according to vital characteristics the shortage may be of the order of 10 (births-deaths) a year to a possible 45 (?). Net migration data are even less precise in numbers and in time; we estimate real values to be higher by a few dozen individuals per year during the 1966-1975 period; such an increase is far from being consistently uniform because very wide variations in migration appear even in two consecutive years.

b. If one compares our estimates for current population with data for the total N.W.T. population collected during the last ten years, he will realize that estimates are higher. Again, it seems that both Censuses, whether national or medical, are subject to undercounting. Some discrepancies come from establishing data at various times of year. Any national *Census* gives a mid-year figure; our estimates, a "year-end" figure, and this may account for up to 15 per cent of the difference in the number of inhabitants. The scale of migration seems also to be a major factor in this underestimation by *Census*; relatively speaking, the greater the flow of in-migrants, the greater the undercounting. Such a relation may explain why differences between the national *Census* and our estimates are greater in 1971 than in 1966 or 1976. Indeed, 1971 *Census* coincides with a very high flux of net migration. N.W.T. Home Statistics, and our estimates which are based on them, incorporate more migrants than does any official *Census*. The *Census* responds to the concept of permanent population; our estimates (here for 1966-1975) to the concept of current population (Table 1.2).

c. If, by the number of northerners, these estimates are higher than *Census* data, the rate of demographic increase from one period to another is the same in both series. From 1966 to 1976, for the N.W.T., the average yearly increase according to national *Census* data (from 28,738 to 42,609) is 4.9 per cent, which is the same rate of increase as our estimates (from 31,510 to 46,286).

Data on current population disclose one of the most striking characteristics of the North — the uneven pattern of demographic growth. That situation is not shown through *Census*; for the years 1966 to 1971, the percentage increase of the N.W.T. population was 21.1 and, for the next five years, 21.9; as both values are nearly the same, they may give the impression that the northern population is constant. On the contrary, our estimates, which incorporate the yearly migration, give evidence of chaotic evolution in the demographic trend. Thus, from the years 1969 to 1971, the mean increase was as much as 7 per cent per year but, from 1972 to 1973, the increase was only 1 per cent. During the last ten years, considering the rate of evolution, one could recognize two periods, the first from 1967 to 1973, with high annual increases, mostly connected to the administrative transfer from Ottawa to Yellowknife, and major oil and gas prospecting. The other period, since 1973, having a yearly alternative migration balance corresponding to some political and economic uncertainties, is a case of "disjointed growth". Both periods testify to wide variations almost every year — for example, from 1969 to 1970, which were just inside a developing period. Such demographic mobility reflects not only the stop-and-go strategy of decision-makers from outside, but also is a major factor in the development of the North itself.

FIGURE 1.1

Average rate of increase, permanent population, Canada and the Northwest Territories, 1941-1985

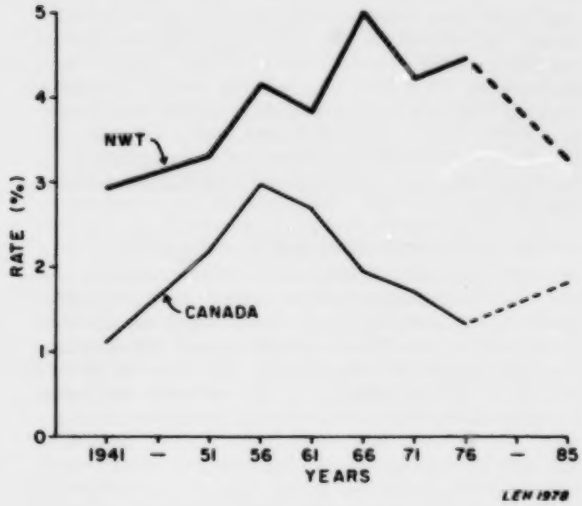


TABLE 1.6

Current population, growth factors, Northwest Territories, 1966-1975

Year ending December 31	Natural increase (a)	Net migration (b)	Current population No.	Annual No.	Change %
1965			30,767		
1966	929	-186	31,510	743	2.4
1967	993	210	32,713	1,203	3.8
1968	1,061	447	34,221	1,508	4.6
1969	979	877	36,077	1,856	5.4
1970	1,057	1,649	38,783	2,706	7.5
1971	951	1,715	41,449	2,666	6.9
1972	925	983	43,357	1,908	4.6
1973	967	-457	43,867	510	1.2
1974	839	166	44,872	1,005	2.3
1975	999	415	46,286	1,414	3.1
1966-1975	9,700	5,819		15,519	
1966-1975 average	970	581		1,551	4.1

a) Data from the *Report on Health*

b) Data from *Statistics Canada*, Interprovincial Migration Estimates.

NOTE: Even if population data deal with the past (1966-1975) they are nevertheless only "estimates." Calendar year.

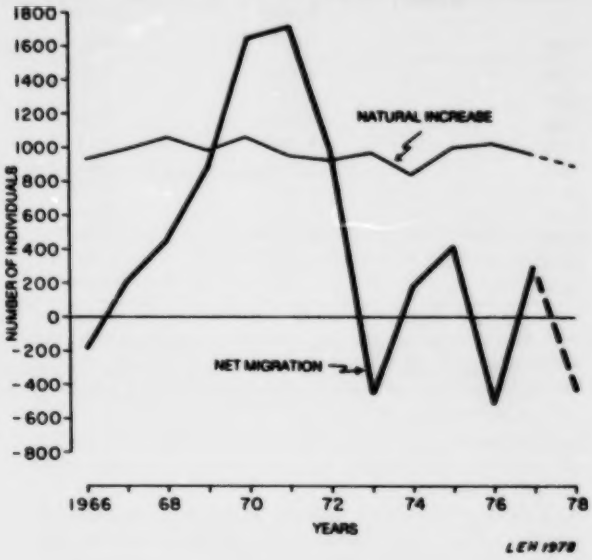
Table 1.6 also shows the respective contributions of natural increase and net migration to current population growth. For the 1966-1975 period taken as a whole, it appears that 6.25 per cent of the 15,519 total increase (native people and whites) is the result of births exceeding deaths. In fact, figures have to be determined on a yearly scale (and preferably on a monthly scale). Eight out of ten years show a surplus of population coming from natural increase; only the years 1970, 1971, and 1972 have more new northerners entered through net migration. Two years, 1966 and 1973, show negative migration. Thus natural increase is not only the most significant contributing factor but is an indication of demographic stability and prolongation of the present ethnic composition. Some writers have noted that statistics on vital characteristics in the N.W.T. are becoming more precise; theoretically, completeness of natural increase data should lead to a lower migration estimate, for migration is often considered to be a residual value. However, such a situation does not explain the diminution of net migration after 1973. Low migration values have also been recorded by Family Allowances statistics. Finally, during the last decade, yearly numbers of births and deaths were about the same. Then for an increasing total population, the rate of natural increase significantly declined. Since 1971, it appears that the drop will level off to a plateau, but it is hard to predict how long that situation will remain at that level.[30]

Among ethnic groups, natural increase does not have the same importance, compared to net migration. The growth of the native population comes almost exclusively from the Territories; net migration from the western provinces, Quebec, Greenland and other places may account for less than 0.5 per cent of the annual increase. A lack of statistics prevents us from taking this insignificant factor into account.

Whites, on the contrary, have two sources of population expansion: migration and natural increase:

> The number of white people in the Northwest Territories was less than 1,000 in 1921, but that number was more than doubled by 1941. The fur resources and the discovery of oil at Norman Wells attracted an influx of whites in the 1920s. Discovery of gold at Yellowknife and pitchblende at Great Bear Lake in the 1930s brought increasing numbers of people to the Mackenzie District and led to the establishment of Federal Government administrative centres. In the 1940s activities connected with the war, the Canol pipeline, airfield construction, and uranium mining at Great Bear Lake, spurred additional immigration. In the decade preceding the 1961 *Census*, the total Northwest Territories population increased by 43 per cent, the white population alone by 83 per cent. This impressive growth in the white portion of the North resulted from greatly expanded government activities, mainly defence, social programs, extensive construction, and road building. In 1961, 82 per cent of the white population was concentrated in the Mackenzie District.[31]

FIGURE 1.2
Growth factors, current population, N.W.T., 1966-1978



During the decade 1966 to 1975, migration was responsible for slightly more than 50 per cent of the total growth of white people (Table 1.6 and Table 3.8). Since the end of the great in-migration period of 1968-1972 (inclusive), natural increase had become the predominating growth factor among whites.

Hay River Area. This region is a good example of migration and of differential growth during a period of time. Let us consider the overall demographic evolution of four associated localities: Hay River, Pine Point, Fort Resolution and Enterprise since 1956 when the total number of inhabitants was 1,528. That number increased to 5,920 by January, 1978, manifesting an average growth of 13 per cent per year.

Throughout the history of that area we can discern four trends: a. The total population has doubled in ten years. b. During the present decade, Pine Point (having only 459 inhabitants in 1966), has now developed to the point that it represents more than one-half of the citizens of Hay River, the main settlement. c. The percentage of population in Fort Resolution (mostly a Métis settlement) was reduced from 38 per cent in 1956, to 21 per cent in 1966, and finally, to only 7.7 per cent by 1977. In this way the ethnic face of the southern coast of Great Slave Lake has been modified following the Second World War. d. In 1976, population dynamics have changed; in the first place, the rhythm of increase has lowered nevertheless, the population reached a maximum of 6,773 by summer 1977. During the following

TABLE 1.7
Vital statistics, N.W.T., 1966-1975

Year	Births No.[a]	Deaths No.	Natural increase[b] Rate a	Rate b	Rate c
1966	1,158	229	38.4	29.5	32.3
1967	1,210	217	31.8	30.4	34.2
1968	1,264	203	35.0	31.0	35.7
1969	1,190	211	31.3	27.1	32.7
1970	1,298	241	32.7	27.3	32.8
1971	1,248	297	27.1	22.9	30.4
1972	1,173	248	25.6	21.3	26.9
1973	1,188	221	26.1	22.0	25.3
1974	1,055	216	22.2	18.7	
1975	1,196	197	26.0	21.6	

Source: *Report on Health Conditions in the Northwest Territories.* Dept. Nat. H. and W., Ottawa-Edmonton-Yellowknife.

[a]Births seem to have been slightly undercounted, at least in the case of migrants.

[b]Rate a has been calculated in relation to permanent population given in *Report on Health;* Rate b has been calculated in relation to our estimates of current population (Table 1.6); Rate c, in *N.W.T. Statistical Abstract,* 1975, after Vital Statistics. All rates are per 1,000 inhabitants.

months, tough mining markets, disappointed expectations flowing from the pipeline decision and winter conditions have all contributed to a decrease in population of several hundred people.

From 1956 to summer 1977, the factors contributing to the growth of population (5,245 individuals) were as follows: new net migrants 61 per cent, natural increase of permanent residents (from 1956 and on) 21 per cent, and natural increase of migrants (since 1956) 18 per cent. In young "action communities" such as Hay River and Pine Point, migration is the dominant factor.[33]

THE N.W.T. 1976-1978

For June 1976, June 1977 and January 1978, N.W.T. Home Statistics calculate, respectively, 46,284, 48,071 and 46,386 inhabitants. These data correspond to our concepts of "average", "high" and "low" in the current population. Anyway, such an evolution indicates that the total population reached a peak somewhere in 1977, and that it is now fixed at the 1976 level. In fact, some difficulties were already present in 1976. Our surmise is that the figure of 48,071 for June 1977 was erroneous; for one thing, there were transients waiting for development (being there, just in case), and for another, statisticians may have overestimated the number of current northerners by a few hundred people. The net migration from June 1976 to June 1978 would have been about 1,800 persons (whites). The calendar year 1977 should have shown a diminution in the N.W.T. total population notwithstanding the natural increase. That diminution is verified by a local decrease in the number of citizens at Inuvik, Fort Simpson, Pine Point, Norman Wells, the Fort Smith area and other predominantly white localities.

The demographic changes in 1976-1978 give another example of the impact made by southern decisions on the level of the N.W.T. activities. If historical trends in the North persist, the diminution in the number of whites would seem to be temporary; immigration may become again an important factor in the demographic evolution of non-indigenous people.

During these years, 1976-1978, the native population has increased; this is particularly apparent in localities which benefit from internal migration, such as Rae-Edzo, Tuktoyaktuk, Baker Lake, Rankin Inlet, Pond Inlet and Frobisher Bay.

Fluctuations in numbers from year to year as well as differential movements among ethnic groups within a single year created added difficulties in making accurate demographic projections.

CHAPTER TWO

DEMOGRAPHIC PROJECTIONS, N.W.T. 1976 to 1985

Before going into the presentation of quantitative values for the next decade, a brief dissertation of our theoretical framework seems essential.

METHODOLOGICAL CONSIDERATIONS

Projections are a relative exercise. We know that existing N.W.T. data are inaccurate. Another of the reasons for inaccurate previsions is that "social and ideological changes taking place in a population act as powerful modifiers of purely demographic trends. This modifying effect is especially strong in those societies experiencing developmental change."[33] Any researcher making projections must say that he could be right only if the assumed conditions actually occur. One of the uncertainties is linked to the level of economic activity for any particular period, and this level may exhibit wide variations even during two consecutive phases. Reports previously produced illustrate the weight that economic mobility has on migrations and on demographic estimates. Thus, those who base their predictions on the modest level of activities around 1960 have made what now appears to be too low an estimate. On the other hand, those who later took into account the extraordinary level of spending by government and for exploration (in the order of 10 per cent per year) during the years 1967 to 1972, have envisaged a higher rate of population growth for those same years.[34] Furthermore a steady population growth rate of 5 per cent per year should give for 1981, a population of 61,353.[35] This last figure seems to be too high and may represent an optimistic calculation. The N.W.T. are presently living in a critical period:

> Following 1973, there has been a steady decline in the number of wells drilled in the Northwest Territories. Reasons for the decline are decisions of Justice Berger, of the National Energy Board, the land use environmental legislation, the Oil and Gas Act, a long period of unsuccessful exploration, the development of substantial additional gas reserves in Alberta and the psychological impact these events have had on the decisions made in the corporate boardrooms. According to witnesses from Petro-Canada, it may take some time to rekindle the momentum and rebuild what is needed to increase activity.[36]

The present economic situation (spring 1978) seems to us to be too depressed to serve as a basis for projecting the demographic trend. Instead, inspired by these previous experiences, we will base our predictions on what may appear to be an intermediate trend. We are in agreement with the Commissioner of the Northwest Territories: "Now that it [the Mackenzie Valley pipeline project] is all over, we can look at ourselves and the North from a realistic point of view and see things in a much clearer perspective."[37] This attitude should be kept in mind by readers of this report.

Projecting the number of inhabitants for an area becomes more difficult if the evolutionary principal factors cannot properly be assessed, as is evidently the case in the Northwest Territories. We will first consider the economic aspects of the situation.

All writers on the North have observed the economic dependency of that frontier region on outside influences: southern ideas, projects, investment, labour, technology and markets are major components in developing the North. Decisions concerning the administrative transfer in 1967, the preference of a Yukon route for the trans-zonal northern pipeline in the autumn of 1977, the mining exploration at Pine Point, were all taken outside the North. Moreover up to very recent times, most of those decisions were made without prior consultation with resident northerners. It is outside our terms of reference to predict how these various factors will react in the coming years. The three most powerful economic features in the North are mining, tourism and national defence;[38] obviously, all these respond to non-northern stimuli. The same is true for federal spending and petroleum prospecting. It is difficult to relate economic and demographic factors inside the Northwest Territories; native people, who compose nearly half of the population, have little connection (compared to the white community) with big business, most having instead a different set of values. A developmental model for the North cannot only consider the internal situation; some sort of all-Canadian framework which would incorporate problems peculiar to underdeveloped countries would seem to be more appropriate.[39]

The general level of economic activity (prosperity, recession or depression) in Canada as a whole will be another major factor in developing the North. The question is: how will that level of activity be assessed for the 1980s?

In this study, only peace time situations are considered. The two World Wars had a profound effect on the Canadian North. The first one had a detrimental effect on the North; pioneering activity almost ceased. The Second Great War had a great impact on transport and communications, but little on settlement itself. We cannot predict the effect that a third conflict might have on northern demography.

There is a second set of factors which is outside of our control: demographic policy and attitudes to be taken towards it by citizens. As far as we know, no Canadian government has yet established a national demographic policy; only some specific matters have been discussed such as health, immigration, urbanization, "ageing", population in depressed in southern areas, Indians. Moreover, we have not noted any comprehensive planning for northern settlements. If new policies should be introduced, they would change our demographic forecasts.

Some researchers have seen that economic development coincides with reduced fertility rates.[40] Thus, theoretically, the contribution by natural increase to the total population should diminish, other factors being equal. In fact, demographers have noted a fall in fertility and in crude birth rates before the seventies. Two unknown new factors may influence the trend: the advent of racial consciousness among native people may stimulate the birth rate, and on the other hand, the use of contraceptive devices may accentuate the drop. As far as the "Back to the Land" movement is concerned, it is too soon to know. If one makes predictions on what is already known about former times, then sustained fertility, but higher mortality, rates are likely.

Finally, there are psychological factors which are even more difficult to assess. Northern administration is largely financed by southerners and so "political money" is one of the biggest components of the N.W.T. economy. It has happened in the past (in the 1930s and later) that southerners have taken a restrictive financial attitude toward the North. This attitude may be observed again. On the contrary, a positive attitude produces northern growth; an illustration is the recent administrative transfer from Ottawa to Yellowknife. Who can predict at the present time what the northern and southern Canadian citizen's response will be to the recommendations of the Prime Minister's Special Representative in the N.W.T.?

Another subject with psychological overtones is the high out-migration of white people. According to Family Allowances data, from 1962 to 1976 (inclusive), there were 82,406 in-migrants but 77,735 out-migrants for both the Yukon and the Northwest Territories; the difference accounts for less than 6 per cent of the in-migrants. Economic variations alone cannot explain this low figure, for it also indicates incomplete information and a negative attitude toward residence in the North. Will that situation be profoundly changed during the next decade? One hopes that it will but one doubts it.

Few political studies exist on the impact of ethnic strife on the demography of the Northwest Territories. Many observers simply prefer not to discuss that controversial question. There are, in fact, both immediate and potential problems; it may happen that two opposing trends develop at the same time: one, towards more unity between groups; another towards more separation. How will those white people who are permanent residents of the North react to the eventual settlement of native land claims? The emotional response of potential in-migrants to that issue may determine population growth in the entire Northwest Territories.

Lastly, there is a degree of frustration among all northerners which seems to be linked to some recent disappointments: among white people and some natives, the decision against a Mackenzian route for the northern pipeline;[41] among native people, disillusionment following the "battle of the caveat" (1973) and because, for both internal and external reasons, they have been committed to waiting so long for their land claims settlement. For both groups, there is continuing disillusionment pertaining to the political status quo. How long will such hopelessness last? From 1967 to 1977, the Northwest Territories were nourished by great expectations. Prolonging their frustrations will not have a positive influence on population growth.

To conclude these brief comments: we must be candid with our readers. Most of the questions mentioned above are beyond our control, our research resources and the timing of the study. We have considered these questions seriously and then proceeded to make what seem to us to be the most logical previsions. Nobody could be more convinced than we are of the tentativeness and complexity of demographic forecasts.

The following is a summary of the assumptions which we have adopted:

Demographic matters. Among Indian people, a slight increase in mortality linked to ageing; a stable birth rate; a slight increase in the "Back to the Land" movement. Net migration among white people, slightly greater than in 1973-1978 but lesser than during 1967-1973. Projection A uses data for permanent population; Projection B follows a current population pattern.

Economic factors. No single new enterprise employing thousands of workers. A higher rate of development in the N.W.T. than in Canada as a whole conforming to the general trend of several decades. Southerners will still finance northern administration and services, at least at the present level. Slight development in the indigenous economy as such, and in the contribution of native people to the dominant economy. A slightly higher rate of full-time employment among indigenous peoples. No drastic application of the "freeze-ecology" concept (i.e., do nothing, but leave nature as it is).

Psychological factors. Frustration will continue if problems remain unsolved. A new awareness of multiple cultural systems will develop. New conceptions of the North will take shape.

Political factors. No change in the external frontiers of the N.W.T. No world war. No new inter-ethnic difficulties of any magnitude. Some political evolution for native people through a land settlement and also for the N.W.T. Government itself. These two political developments will bring

into the N.W.T. what we have designated by the phrase, "political money", a major economic factor.

At the end of the projected period (December 1985 for Projection A; June 1985 for Projection B), events may become more susceptible to change than has been observed during the years 1976-1985.

Projecting. There are two steps in the elaboration of each projection. The first was an estimation of the structure of the population from 1971 to 1976. We start from 1971 *Census*. The yearly *Report on Health* of the Northwest Territories provided data by ethnic group on the number of children born and of people who died. The Family Allowances statistics give data for migrants, all on an annual basis. With these statistics, and with the number of people living in 1971, the idea was to reclassify by age and sex, the structure of the population of the Northwest Territories in 1976 in each ethnic group: "Indians" (Dene), "Eskimos" (Inuit) and "Others" (mostly whites, some Métis.)[42]

Having obtained the results of these estimations, the second step was to extrapolate, also by ethnic group, age and sex, from the number of living people in 1976, under certain assumptions of fertility, mortality, and migration, the structure of the population expected by 1985. Each year the number of births was calculated by applying a constant fertility rate likely to occur in each ethnic group, during the entire period. The number of deaths was obtained from an estimated mortality rate, again, constant for the entire period.

Future fertility rates per 1,000 women of the 15-49 age group were calculated for the years 1973 to 1976. They were as follows: 108 for Indian people, 168 for the Inuit and 100 for "Others". Projected mortality levels were obtained from crude death rates between 1972 and 1976. According to the *Report on Health*, these rates have changed during these five years: from 6.9 to 5.9 among the Dene; 8.8 to 6.1 among the Inuit; and 6.8 to 3.4 among "Whites". For Indians and Inuit the expected mortality rate in the near future is estimated at 6.5 per thousand, while the rate for "Others" was as low as 4.6. These "high" fertility rates and "low" mortality rates have been applied to an under-recorded population data.

The numbers of deaths were then distributed among each age group and also by sex, over the years, for each ethnic group; we have used percentages given by Lu and Mathurin in 1973 (p. 79); for example, with respect to children of less than one year, these percentages were 17.5 for males and 12.2 for females among the Dene; 23.3 for males and 21.6 for females among the Inuit; and 15.8 for males and 10.2 for females among "Whites".

To determine migration, we applied a constant rate of net migration for the white population (an increase of 1.5 per cent of the total white population for the preceding year) in accordance with a trend which has continued during the last ten years. Migrations from outside the indigenous population were not taken into consideration. Among non-indigenous people, the total numbers of migrants were also distributed in each group by age and sex. According to data from Health Care, for example, in a single year, 10.6 of all migrants are males from 20 to 24 years and 13.5 of all migrants are females of the same age. The two classes of 20-24 and 25-29 account for 43.4 of all net migrants. As these percentages apply only to a few hundred people, they have not had a great influence on the total number of people of these ages already living in the Territories; we could not, through that process, expect to find significant anomalies in the final distribution of people by age classification. Thus, in 1985, we would not only have the total number of people for each ethnic group, but also a distribution of all living people by age groups and sex.

For our calculations (1971-1976), as in our projections (1976-1985), we had to effect, every year, an age-class shift of one year, so that every year one-fifth of the five years' age group was moved to the superior age group. This shifting was always the first operation we made after obtaining the volume of population for the preceding year. Due to the precarious basis of statistics, we have not chosen to make our projections more refined.

PROJECTION A

BASIC DATA: TOTAL POPULATION

TABLE 2.1
Projected permanent population, N.W.T., 1976-1985

Year ending December 31	Population	
	No.	Change %
1976	43.154	
1977	44.470	3.05
1978	45.856	3.12
1979	47.304	3.16
1980	48.818	3.20
1981	50.391	3.22
1982	52.037	3.27
1983	53.746	3.28
1984	55.516	3.29
1985	57.355	3.31
Total increase	14.201	
Average increase 1976-1985	1.578	3.21

Compare with Table 2.12 for current population projection

TABLE 2.2
Projected permanent population, N.W.T., 1976, by age, sex and ethnic group

Age	Dene		Inuit		Others		All
	M	F	M	F	M	F	
0 - 1	93	87	252	246	282	252	1.212
1 - 4	436	405	877	868	1.085	974	4.645
5 - 9	619	579	1.134	1.158	1.312	1.181	5.993
10 - 14	571	571	1.018	1.040	1.200	1.029	5.429
15 - 19	456	490	783	801	987	832	4.349
20 - 24	372	387	595	603	950	886	3.793
25 - 29	310	296	479	467	1.063	1.020	3.635
30 - 34	250	228	399	386	1.045	934	3.242
35 - 39	206	192	345	340	884	723	2.690
40 - 44	174	175	291	274	693	521	2.128
45 - 49	151	161	240	199	548	397	1.696
50 - 54	136	127	196	151	413	322	1.345
55 - 59	117	93	149	118	302	245	1.024
60 - 64	98	80	111	89	226	158	762
65 - 69	78	70	76	62	155	90	531
70+	149	153	87	78	120	92	679
Subtotal	4.216	4.094	7.042	6.880	11.265	9.657	43.154
Total	8.310		3.922		20.922		43.154

Source: *Report on Health* and Family Allowances Statistics.
Calculation: *Census* 1971, plus natural increase, plus net migration by ethnic group, sex, age and year, from 1971 to 1976

TABLE 2.3
Projected permanent population, N.W.T., 1977, by age, sex and ethnic group

Age	Dene		Inuit		Others		All
	M	F	M	F	M	F	
0 - 1	100	92	241	235	269	241	1,178
1 - 4	419	390	905	893	1,107	992	4,706
5 - 9	603	563	1,132	1,141	1,333	1,196	5,968
10 - 14	581	573	1,040	1,083	1,230	1,068	5,555
15 - 19	478	505	829	848	1,043	884	4,587
20 - 24	388	408	632	642	986	915	3,971
25 - 29	321	313	501	493	1,064	1,020	3,712
30 - 34	261	241	414	401	1,062	964	3,343
35 - 39	214	199	355	348	924	772	2,812
40 - 44	179	177	301	286	734	563	2,240
45 - 49	155	163	249	212	577	425	1,781
50 - 54	138	134	204	160	439	338	1,413
55 - 59	120	99	156	124	321	260	1,080
60 - 64	101	82	118	93	237	175	806
65 - 69	80	71	82	66	166	103	568
70+	157	159	99	87	140	108	750
Subtotal	4,295	4,169	7,258	7,092	11,632	10,024	44,470
Total	8,464		14,350		21,656		44,470

TABLE 2.4
Projected permanent population, N.W.T., 1978, by age, sex and ethnic group

Age	Dene		Inuit		Others		All
	M	F	M	F	M	F	
0 - 1	104	96	253	248	280	252	1,233
1 - 4	413	383	914	901	1,111	996	4,718
5 - 9	586	547	1,130	1,134	1,356	1,214	5,967
10 - 14	585	571	1,055	1,078	1,260	1,103	5,652
15 - 19	498	518	870	890	1,094	935	4,805
20 - 24	405	427	670	682	1,029	952	4,165
25 - 29	333	331	526	522	1,074	1,028	3,814
30 - 34	272	254	430	417	1,076	989	3,438
35 - 39	222	207	366	358	960	817	2,930
40 - 44	185	180	310	297	775	608	2,355
45 - 49	159	165	258	225	608	457	1,872
50 - 54	140	140	211	169	467	356	1,483
55 - 59	123	105	164	130	342	276	1,140
60 - 64	104	84	125	97	250	192	852
65 - 69	82	72	88	70	177	116	605
70+	165	165	112	97	161	127	817
Subtotal	4,376	4,245	7,482	7,315	12,020	10,418	45,856
Total	8,621		14,797		22,438		45,856

TABLE 2.5
Projected permanent population, N.W.T., 1979, by age, sex and ethnic group

Age	Dene		Inuit		Others		All
	M	F	M	F	M	F	
0 - 1	108	100	267	260	293	264	1,292
1 - 4	413	382	932	920	1,125	1,010	4,782
5 - 9	571	532	1,130	1,130	1,377	1,229	5,969
10 - 14	585	566	1,067	1,088	1,288	1,135	5,729
15 - 19	514	528	906	927	1,141	983	4,999
20 - 24	423	445	709	723	1,074	993	4,367
25 - 29	346	349	554	553	1,092	1,043	3,937
30 - 34	283	268	448	436	1,090	1,012	3,537
35 - 39	231	216	378	369	991	859	3,044
40 - 44	191	184	319	308	815	653	2,470
45 - 49	163	167	267	237	641	491	1,966
50 - 54	143	145	218	179	495	377	1,557
55 - 59	125	111	171	137	364	293	1,201
60 - 64	107	87	132	101	263	209	899
65 - 69	84	73	94	74	189	130	644
70+	173	171	127	108	184	148	911
Subtotal	4,460	4,324	7,719	7,550	12,422	10,829	47,304
Total	8,784		15,269		23,251		47,304

TABLE 2.6
Projected permanent population, N.W.T., 1980, by age, sex and ethnic group

Age	Dene		Inuit		Others		All
	M	F	M	F	M	F	
0 - 1	112	104	280	273	305	274	1,348
1 - 4	417	385	960	946	1,148	1,033	4,889
4 - 9	559	520	1,134	1,132	1,397	1,245	5,987
10 - 14	582	559	1,077	1,095	1,315	1,164	5,792
15 - 19	527	535	937	958	1,185	1,028	5,170
20 - 24	440	462	747	763	1,120	1,037	4,569
25 - 29	360	367	584	586	1,117	1,064	4,078
30 - 34	285	283	468	457	1,105	1,033	3,641
35 - 39	240	226	391	381	1,019	898	3,155
40 - 44	198	189	329	319	854	697	2,586
45 - 49	168	169	276	249	677	527	2,066
50 - 54	146	149	226	190	524	400	1,635
55 - 59	128	117	178	144	386	310	1,263
60 - 64	110	91	139	105	278	226	949
65 - 69	87	75	101	78	210	172	686
70+	181	178	143	120	210	172	1,004
Subtotal	4,550	4,409	7,970	7,796	12,841	11,252	48,818
Total		8,959		15,766		24,093	48,818

TABLE 2.7
Projected permanent population, N.W.T., 1981, by age, sex and ethnic group

Age	Dene		Inuit		Others		All
	M	F	M	F	M	F	
0 - 1	116	108	292	286	317	286	1,405
1 - 4	424	392	994	977	1,178	1,061	5,026
5 - 9	550	511	1,144	1,140	1,419	1,264	6,028
10 - 14	577	551	1,085	1,101	1,341	1,190	5,845
15 - 19	537	539	963	984	1,226	1,070	5,319
20 - 24	456	477	783	801	1,167	1,083	4,767
25 - 29	375	385	616	620	1,147	1,091	4,234
30 - 34	307	299	490	481	1,123	1,055	3,755
35 - 39	250	237	405	395	1,045	933	3,265
40 - 44	205	195	339	330	891	740	2,700
45 - 49	173	172	286	261	713	565	2,170
50 - 54	149	153	234	201	555	425	1,717
55 - 59	131	122	186	151	410	328	1,328
60 - 64	113	95	146	110	295	243	1,002
65 - 69	90	77	108	82	212	158	727
70+	189	185	160	133	237	199	1,003
Subtotal	4,642	4,498	8,231	8,053	13,276	11,691	50,391
Total		9,140		16,284		24,967	50,391

TABLE 2.8
Projected permanent population, N.W.T., 1982, by age, sex and ethnic group

Age	Dene		Inuit		Others		All
	M	F	M	F	M	F	
0 - 1	120	112	305	297	331	297	1,462
1 - 4	433	401	1,031	1,014	1,212	1,095	5,186
5 - 9	545	506	1,161	1,154	1,444	1,286	6,096
10 - 14	572	543	1,094	1,108	1,367	1,216	5,900
15 - 19	544	540	985	1,006	1,265	1,110	5,450
20 - 24	471	489	817	837	1,215	1,130	4,959
25 - 29	390	402	648	655	1,181	1,123	4,399
30 - 34	320	315	514	507	1,144	1,078	3,878
35 - 39	260	249	421	411	1,070	966	3,377
40 - 44	213	202	350	342	925	783	2,815
45 - 49	178	176	296	273	750	604	2,277
50 - 54	153	157	242	212	586	454	1,804
55 - 59	134	127	194	159	435	347	1,396
60 - 64	116	99	153	115	313	260	1,056
65 - 69	93	80	115	87	225	173	773
70+	198	192	179	145	266	229	1,209
Subtotal	4,740	4,590	8,505	8,322	13,729	12,151	52,037
Total		9,330		16,827		25,880	52,037

TABLE 2.9

Projected permanent population, N.W.T., 1983, by age, sex and ethnic group

Age	Dene		Inuit		Others		All
	M	F	M	F	M	F	
0 - 1	123	115	318	310	344	308	1,518
1 - 4	444	412	1,071	1,052	1,253	1,131	5,363
5 - 9	542	504	1,184	1,175	1,473	1,313	6,192
10 - 14	566	536	1,104	1,116	1,393	1,241	5,956
15 - 19	549	540	1,005	1,025	1,302	1,148	5,569
20 - 24	485	499	849	870	1,262	1,177	5,142
25 - 29	405	418	681	690	1,219	1,159	4,572
30 - 34	333	331	540	535	1,168	1,104	4,011
35 - 39	271	262	439	429	1,095	997	3,493
40 - 44	221	210	362	355	958	824	2,930
45 - 49	184	180	305	285	786	644	2,384
50 - 54	157	161	251	223	618	485	1,895
55 - 59	137	132	202	168	461	368	1,468
60 - 64	119	104	160	121	331	277	1,112
65 - 69	96	83	121	92	239	188	819
70+	208	199	198	158	297	262	1,322
Subtotal	4,841	4,686	8,790	8,604	14,199	12,626	53,746
Total		9,527		17,394		26,825	53,746

TABLE 2.10

Projected permanent population, N.W.T., 1984, by age, sex and ethnic group

Age	Dene		Inuit		Others		All
	M	F	M	F	M	F	
0 - 1	127	118	331	323	357	320	1,576
1 - 4	455	423	1,114	1,094	1,297	1,170	5,553
5 - 9	544	505	1,212	1,201	1,507	1,344	6,313
10 - 14	560	530	1,117	1,127	1,420	1,267	6,021
15 - 19	551	538	1,023	1,042	1,337	1,184	5,675
20 - 24	497	507	878	900	1,309	1,224	5,315
25 - 29	420	433	714	725	1,261	1,199	4,752
30 - 34	346	347	567	564	1,195	1,133	4,152
35 - 39	282	276	458	449	1,120	1,027	3,612
40 - 44	230	219	375	369	989	863	3,045
45 - 49	190	185	314	297	820	685	2,491
50 - 54	161	165	260	233	651	518	1,988
55 - 59	140	137	210	177	488	391	1,543
60 - 64	122	109	167	127	351	295	1,171
65 - 69	99	86	127	96	253	204	865
70+	218	207	218	172	331	298	1,444
Subtotal	4,942	4,785	9,085	8,896	14,686	13,122	55,516
Total		9,727		17,981		27,808	55,516

TABLE 2.11

Projected permanent population, N.W.T., 1985, by age, sex and ethnic group

Age	Dene		Inuit		Others		All
	M	F	M	F	M	F	
0 - 1	131	121	343	335	370	332	1,632
1 - 4	467	434	1,159	1,138	1,344	1,211	5,753
5 - 9	548	509	1,245	1,232	1,546	1,379	6,459
10 - 14	556	525	1,133	1,141	1,448	1,294	6,097
15 - 19	552	535	1,040	1,058	1,372	1,219	5,776
20 - 24	507	513	905	927	1,355	1,271	5,478
25 - 29	434	447	746	759	1,304	1,241	4,931
30 - 34	360	363	595	594	1,226	1,164	4,302
35 - 39	294	290	479	471	1,146	1,058	3,738
40 - 44	239	229	390	384	1,019	899	3,160
45 - 49	197	191	324	309	854	726	2,601
50 - 54	166	169	269	244	685	552	2,085
55 - 59	143	142	218	186	516	416	1,621
60 - 64	125	114	175	134	372	314	1,234
65 - 69	102	90	133	100	269	220	914
70+	229	215	239	187	368	336	1,574
Subtotal	5,050	4,887	9,393	9,199	15,194	13,632	57,355
Total		9,937		18,592		28,826	57,355

PROJECTION B

BASIC DATA: TOTAL POPULATION

TABLE 2.12
Projected current population, N.W.T., 1976-1985

Year ending June 1	Population	
	No.	Change %
1976	46,500	
1977	47,942	3.10
1978	49,460	3.17
1979	51,045	3.20
1980	52,699	3.24
1981	54,420	3.27
1982	56,213	3.29
1983	58,082	3.32
1984	60,020	3.34
1985	62,037	3.36
Total increase	15,537	
Average increase 1976-1985	1,726	3.25

Compare with Table 2.1 for permanent population projection.

TABLE 2.13
Projected current population, N.W.T., 1976, by age, sex and ethnic group

Age	Dene[1]		Inuit[1]		Others[1]		All
	M	F	M	F	M	F	
- 1	88	81	266	261	321	288	1,305
1 - 4	410	380	928	917	1,244	1,117	4,996
5 - 9	582	544	1,210	1,225	1,503	1,354	6,418
10 - 14	537	537	1,076	1,100	1,376	1,179	5,805
15 - 19	429	461	827	847	1,131	954	4,649
20 - 24	350	364	629	638	1,088	1,014	4,083
25 - 29	291	278	506	493	1,217	1,169	3,954
30 - 34	235	214	423	408	1,196	1,069	3,545
35 - 39	194	180	365	359	1,014	829	2,941
40 - 44	163	165	308	290	793	597	2,316
45 - 49	152	152	253	211	628	455	1,841
50 - 54	128	120	208	159	472	369	1,456
55 - 59	110	87	158	125	345	280	1,105
60 - 64	92	75	118	95	259	182	821
65 - 69	73	66	81	66	177	103	566
70+	140	144	91	82	137	105	699
Subtotal	3,964	3,848	7,447	7,276	12,901	11,064	46,500
Total	7,812[2]		14,723[2]		23,965		46,500

Sources: [1]From percentage, age, 1976, Table 2.1 applied to data given in (b) and (c)
[2]*Report on Health . . .*, 1976
[3]N.W.T. Home Statistics. Minor adjustment.

Differences in sources used, in the means of calculation, month of the year and migrants, explain differences in volume of population Projections A and B.

TABLE 2.14
Projected current population, N.W.T., 1977, by age, sex and ethnic group.

Age	Dene		Inuit		Others		All
	M	F	M	F	M	F	
0 - 1	94	87	253	248	308	275	1,265
1 - 4	394	365	956	945	1,266	1,138	5,064
5 - 9	567	529	1,197	1,207	1,527	1,372	6,399
10 - 14	546	538	1,100	1,124	1,411	1,224	5,943
15 - 19	450	475	876	897	1,195	1,014	4,907
20 - 24	365	383	668	679	1,131	1,049	4,275
25 - 29	302	294	530	521	1,220	1,170	4,037
30 - 34	245	226	439	423	1,216	1,105	3,654
35 - 39	201	187	376	368	1,059	885	3,076
40 - 44	168	167	317	303	841	646	2,442
50 - 54	130	126	215	168	503	386	1,528
55 - 59	113	93	166	131	366	298	1,167
60 - 64	95	76	125	98	271	202	867
65 - 69	75	67	87	71	189	117	606
70+	147	150	104	92	159	124	776
Subtotal	4,037	3,917	7,672	7,500	13,324	11,492	47,942
Total	7,954		15,172		24,816		47,942

TABLE 2.15
Projected current population, N.W.T., 1978, by age, sex and ethnic group

Age	Dene		Inuit		Others		All
	M	F	M	F	M	F	
0 - 1	98	91	268	262	322	286	1,327
1 - 4	388	360	964	953	1,269	1,141	5,075
5 - 9	551	513	1,194	1,200	1,552	1,392	6,402
10 - 14	550	536	1,116	1,140	1,444	1,265	6,051
15 - 19	468	487	920	941	1,254	1,072	5,142
20 - 24	381	401	709	722	1,180	1,091	4,484
25 - 29	314	311	557	552	1,232	1,179	4,145
30 - 34	255	239	456	441	1,233	1,134	3,758
35 - 39	209	195	388	378	1,099	938	3,207
40 - 44	174	170	327	315	888	697	2,571
45 - 49	149	156	273	239	699	523	2,039
50 - 54	132	132	223	178	534	407	1,606
55 - 59	115	99	174	137	389	316	1,230
60 - 64	98	78	132	102	285	221	916
65 - 69	77	68	94	75	201	132	647
70+	154	156	118	103	184	145	860
Subtotal	4,113	3,992	7,913	7,738	13,765	11,939	49,460
Total	8,105		15,651		25,704		49,460

TABLE 2.16
Projected current population, N.W.T., 1979, by age, sex and ethnic group

Age	Dene		Inuit		Others		All
	M	F	M	F	M	F	
0 - 1	102	95	282	275	335	299	1,388
1 - 4	388	360	985	973	1,287	1,155	5,148
5 - 9	537	499	1,193	1,196	1,574	1,409	6,408
10 - 14	550	531	1,129	1,151	1,477	1,301	6,139
15 - 19	483	496	957	980	1,309	1,128	5,353
20 - 24	397	418	749	765	1,232	1,138	4,699
25 - 29	326	328	586	585	1,253	1,196	4,274
30 - 34	266	252	475	461	1,250	1,160	3,864
35 - 39	217	204	401	390	1,136	986	3,334
40 - 44	180	174	337	327	934	749	2,701
45 - 49	153	158	283	252	738	562	2,146
50 - 54	134	137	231	189	566	431	1,688
55 - 59	117	105	182	143	414	334	1,295
60 - 64	100	81	139	106	301	240	967
65 - 69	79	69	101	79	214	148	690
70+	161	162	134	115	210	169	951
Subtotal	4,190	4,069	8,164	7,987	14,230	12,405	51,045
Total	8,259		16,151		26,635		51,045

TABLE 2.17
Projected current population, N.W.T., 1980, by age, sex and ethnic group

Age	Dene		Inuit		Others		All
	M	F	M	F	M	F	
0 - 1	106	97	296	289	350	312	1,450
1 - 4	392	364	1,015	1,000	1,313	1,179	5,263
5 - 9	526	488	1,198	1,198	1,596	1,427	6,433
10 - 14	547	525	1,139	1,159	1,507	1,335	6,212
15 - 19	495	502	989	1,013	1,360	1,180	5,539
20 - 24	413	434	789	807	1,286	1,189	4,918
25 - 29	339	345	618	620	1,281	1,220	4,423
30 - 34	277	266	496	484	1,268	1,185	3,976
35 - 39	226	214	415	403	1,169	1,030	3,457
40 - 44	186	179	348	339	978	800	2,830
45 - 49	157	160	293	265	777	604	2,256
50 - 54	137	141	239	201	599	458	1,775
55 - 59	119	110	190	150	440	353	1,362
60 - 64	102	85	147	110	318	259	1,021
65 - 69	81	70	108	83	227	164	733
70+	169	168	151	127	239	197	1,051
Subtotal	4,272	4,148	8,431	8,248	14,708	12,892	52,699
Total	8,420		16,679		27,600		52,699

TABLE 2.18
Projected current population, N.W.T., 1981, by age, sex and ethnic group

Age	Dene		Inuit		Others		All
	M	F	M	F	M	F	
0 - 1	109	101	310	302	365	325	1,512
1 - 4	399	369	1,051	1,034	1,349	1,210	5,412
5 - 9	518	480	1,209	1,206	1,621	1,447	6,481
10 - 14	543	518	1,148	1,166	1,536	1,365	6,276
15 - 19	504	506	1,017	1,041	1,407	1,229	5,704
20 - 24	428	448	827	847	1,341	1,242	5,133
25 - 29	353	362	651	656	1,315	1,251	4,588
30 - 34	288	281	519	509	1,289	1,210	4,096
35 - 39	235	225	430	418	1,199	1,071	3,577
40 - 44	193	185	359	351	1,020	849	2,957
45 - 49	162	163	303	278	817	648	2,371
50 - 54	140	145	248	212	635	488	1,868
55 - 59	122	115	198	158	467	374	1,434
60 - 64	104	89	155	115	336	278	1,077
65 - 69	83	72	115	86	241	181	778
70+	177	174	169	140	269	227	1,156
Subtotal	4,358	4,232	8,709	8,519	15,207	12,395	53,420
Total	8,590		17,228		28,602		54,420

TABLE 2.19
Projected current population, N.W.T., 1982, by age, sex and ethnic group.

Age	Dene		Inuit		Others		All
	M	F	M	F	M	F	
0 - 1	113	104	323	216	380	339	1,575
1 - 4	407	377	1,091	1,072	1,392	1,247	5,586
5 - 9	513	475	1,227	1,221	1,651	1,472	6,559
10 - 14	538	510	1,157	1,173	1,565	1,393	6,336
15 - 19	511	507	1,041	1,065	1,452	1,275	5,851
20 - 24	442	460	863	885	1,395	1,296	5,341
25 - 29	367	378	685	693	1,355	1,287	4,765
30 - 34	300	296	544	536	1,312	1,237	4,225
35 - 39	245	235	447	435	1,228	1,109	3,699
40 - 44	200	192	371	363	1,060	896	3,082
45 - 49	167	166	312	291	859	693	2,488
50 - 54	143	149	257	223	671	521	1,964
55 - 59	125	120	206	167	496	397	1,511
60 - 64	107	93	163	121	356	297	1,137
65 - 69	85	74	121	90	256	198	824
70+	186	180	188	153	303	260	1,270
Subtotal	4,449	4,316	8,996	8,804	15,731	13,917	56,213
Total	8,765		17,800		29,648		56,213

TABLE 2.20
Projected current population, N.W.T., 1983, by age, sex and ethnic group

Age	Dene		Inuit		Others		All
	M	F	M	F	M	F	
0 - 1	116	108	337	328	396	351	1,636
1 - 4	417	386	1,134	1,115	1,439	1,289	5,780
5 - 9	511	473	1,251	1,243	1,686	1,501	6,665
10 - 14	533	503	1,168	1,182	1,594	1,422	6,402
15 - 19	515	507	1,062	1,086	1,494	1,318	5,982
20 - 24	455	469	897	920	1,448	1,351	5,540
25 - 29	381	393	720	730	1,399	1,329	4,952
30 - 34	312	311	571	565	1,340	1,266	4,365
35 - 39	255	247	465	454	1,256	1,145	3,822
40 - 44	208	200	384	376	1,099	943	3,210
45 - 49	173	170	322	303	900	739	2,607
50 - 54	147	152	266	235	709	556	2,065
55 - 59	128	125	214	176	526	422	1,591
60 - 64	110	97	171	127	378	317	1,200
65 - 69	87	77	127	94	272	216	873
70+	194	187	208	167	339	297	1,392
Subtotal	4,542	4,405	9,297	9,101	16,275	14,462	58,082
Total	8,947		18,398		30,737		58,082

TABLE 2.21
Projected current population, N.W.T., 1984, by age, sex and ethnic group

Age	Dene		Inuit		Others		All
	M	F	M	F	M	F	
0 - 1	120	111	350	341	411	365	1.698
1 - 4	428	396	1.180	1.159	1.491	1.333	5.987
5 - 9	512	474	1.281	1.271	1.727	1.536	6.801
10 - 14	529	497	1.182	1.193	1.625	1.451	6.477
15 - 19	518	505	1.081	1.104	1.534	1.358	6.100
20 - 24	466	477	928	952	1.501	1.405	5.729
25 - 29	395	407	754	767	1.446	1.374	5.143
30 - 34	325	326	600	596	1.372	1.299	4.518
35 - 39	265	260	485	475	1.284	1.180	3.949
40 - 44	216	208	398	391	1.134	987	3.334
45 - 49	179	175	332	315	941	784	2.726
50 - 54	151	156	275	247	746	594	2.169
55 - 59	131	129	222	186	558	449	1.675
60 - 64	113	102	179	134	401	338	1.267
65 - 69	90	80	134	99	288	234	925
70+	202	194	229	182	378	337	1.522
Subtotal	4.640	4.497	9.610	9.412	16.837	15.024	60.020
Total	9.137		19.022		31.861		60.020

TABLE 2.22
Projected current population, N.W.T., 1985, by age, sex and ethnic group

Age	Dene		Inuit		Others		All
	M	F	M	F	M	F	
0 - 1	124	114	363	354	426	378	1.759
1 - 4	440	407	1.228	1.205	1.545	1.381	6.206
5 - 9	516	477	1.317	1.305	1.773	1.575	6.963
10 - 14	526	492	1.198	1.208	1.658	1.482	6.564
15 - 19	519	502	1.099	1.121	1.573	1.397	6.211
20 - 24	475	483	957	981	1.554	1.460	5.910
25 - 29	408	420	787	803	1.495	1.423	5.336
30 - 34	338	341	630	628	1.408	1.335	4.680
35 - 39	276	273	507	498	1.314	1.215	4.083
40 - 44	225	217	413	407	1.169	1.030	3.461
45 - 49	185	181	343	327	980	830	2.846
50 - 54	156	160	284	259	784	633	2.276
55 - 59	134	133	231	196	591	478	1.763
60 - 64	116	106	187	141	425	360	1.335
65 - 69	93	83	141	104	306	253	980
70+	211	202	252	198	420	381	1.664
Subtotal	4.742	4.591	9.937	9.735	17.421	15.611	62.037
Total	9.333		19.672		33.032		62.037

CHAPTER THREE

MAIN IMPLICATIONS FROM THE RECENT SITUATION AND FROM PROJECTIONS, 1961-1985

GENERAL EVOLUTION UP TO 1985

The N.W.T. population is bound to reach 57,355 permanent inhabitants by December 1985 (Projection A), or 62,037 current people (Projection B) by June 1985. The total number of new northerners is in the order of 15,000, which means an overall increase of 33 per cent in 9 years. The average yearly rate is a little higher than 3.2 per cent, a value somewhat lower than was documented during the 1966-1976 period.

Considering all ethnic groups together, natural increase will be a more decisive factor than net migration. According to Projection A, from 1977 to 1985, migration will account for 22.8 per cent of all increase in the N.W.T. Both Inuit and Dene are expected to have a rate of total increase less, during a period of 9 years, than the rate of "Others" (28.3 per cent, vs. 37.8 per cent, after Table 3.9). About 40 per cent of the demographic growth of "Others" will be the result of net migration. In 1985, altogether, Inuit and Dene will not reach 50 per cent of the total population (49.7 per cent after Projection A; 46.7 per cent after Projection B), according to present ethnic definitions.

Concentration of population is an ongoing process for Amerindians and, above all, for non-Amerindians. A general increase in average age of population is expected (Tables 3.12 to 3.15). More effort will have to be made specifically for young adults in various fields of employment, as well as housing, post-secondary education and community development.

TERRITORIALITY

Such a topic is concerned with the multiple relations any population experiences within its own area; these relations are physical and psychological. We will try to identify some of these features from a demographic point of view. Questions relating to size of communities, classes of settlements, distribution of population, the structure of ecumene zones in the North, permanency of sites and the "Back to the Land" movement among others are pertinent here. Basic evolutionary trends will lead us to forecast the situation for 1985.

SIZE AND CLASSES OF SETTLEMENTS

It is necessary, once more, to stress the lack of data available to us. Moreover, there is a problem of definition. "The word 'settlement' is perhaps misleading as many of the places which appear on the map of the Arctic are no more than a cluster of buildings around a fur-trading post."[43] Even today, many small sites have an underorganized look. To use official documents like *Census* may be disappointing; even when they give some detailed statistics, they do not caution readers to keep in mind their incompleteness. For example, we may think that the number of all settlements could have been in the order of 60 around 1956 when, in fact, a figure of 200 would be more realistic. After doing several exercises, we decided to use 1961, 1970 and 1977 as reference years for projecting the settlement situation.

For 1961, we considered population data produced from the *Census*[44] and completed them by adding "radarmen" and hunting "campers" in the Mackenzie. We have also used an official map showing the distribution of the northern population.[45] For 1970 and 1977, what we call "N.W.T. Home Statistics" have provided a basis for standardizing our methods. All three years dealt with the current population.

A choice of classes of settlements had to be made. We have tried to group localities according to their factual demographic size. So, there are classes of less than 50 inhabitants, from 50 to 299, from 300 to 749, from 750 to 1,499, from 1,500 to 2,999, from 3,000 to 5,999, and from 6,000 to 15,000 (15,000 to cope with the 1985 projections). To us, these categories appear to be less arbitrary than the others. However, they may not apply to other parts of the Canadian North.

How has the situation evolved during the last twenty years or so? As far as settlements are concerned, three facts are obvious. First, there has been a general diminution in the number of all settlements by as much as 45 per cent between 1961 and 1977; that percentage would have reached more than 50 per cent without the recent "Back to the Land" trend. Secondly, settlements with less than 750 inhabitants were fewer in 1977 than in 1961 — the absolute number was reduced from 206 to 99. Finally, settlements with more than 750 inhabitants increased from 4 to 16 or, by a percentage of all localities, from a mere 2 per cent to 14 per cent. We knew the process of demographic concentration; now, we can see its range. Radical changes in the size of localities have been realized during the present generation.

The movement is far more apparent when current inhabitants are considered. In 1961, as much as 70 per cent of the population were still living in settlements with less than 750 inhabitants; the percentage was 43 per cent

in 1970 and 29 per cent seven years later. Thus one can see the upgrading of the most populous class: in 1961, it was the 50-to-299 group, in 1970, the 300-to-749 group, and, in 1977, both the 750-to-1,499 and the over-6,000 groups. This reveals a clear trend towards urbanization in its northern type.

Consideration of the mechanisms influencing this upward movement requires some explanation. Main factors are: a. the coming of white people who are mainly responsible for the huge increase of people living in settlements with more than 750 inhabitants. Again, one can see the big difference in size of settlements through ethnic groups. Two-thirds of the Inuit people are still living in localities with less than 750 inhabitants, while two-thirds of white people live in agglomerations of 3,000 or over; b. the normal demographic increase leads a settlement to move up in upper categories; c. the spontaneous movement of native people from small localities of less than 750 people (and even less than 300) to the 750-1,499 class particularly. The indigenous people are mobile within the Northwest Territories. In 1969-1970, 30 per cent of the population 14 years of age and over resided in more than one settlement; the percentage was 46 for Baffin Eskimos.[48]

FIGURE 3.1
Number of inhabitants by classes of settlements, current population, N.W.T., 1961 and 1977. By percentage.

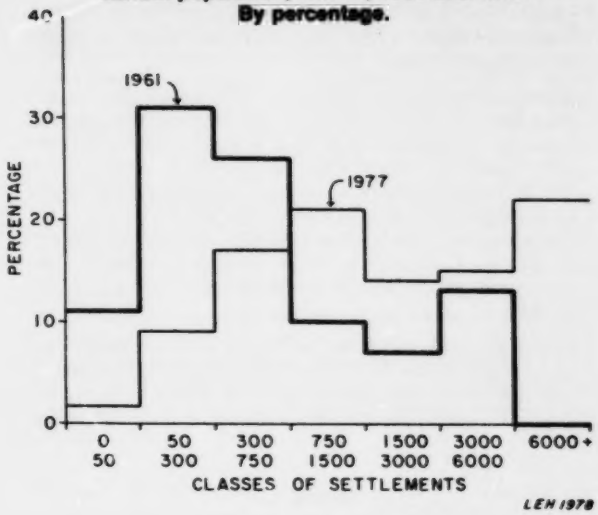


TABLE 3.1
Demographic evolution by classes of settlements, current population, N.W.T., 1961 and 1977

Classes	1961 Settlements No.	1961 Population No.	1961 %	1977 Settlements No.	1977 Population No.	1977 %
A or less than 50 inhabitants	128	2,745	11.1	50	746	1.6
B or 50 - 299	65	8,230	33.1	30	4,432	9.2
C or 300 - 749	13	6,417	25.9	19	8,912	18.6
D or 750 - 1,499	2	2,586	10.4	10	9,276	19.3
E or 1,500 - 2,999	1	1,681	6.8	3	6,785	14.1
F or 3,000 - 5,999	1	3,141	12.7	2	7,420	15.4
G or 6,000 - 15,000	0	0	0.0	1	10,500	21.8
Total	210	24,800	100.0	115*	48,071	100.0

Source: For 1961, *Census* and *The Arctic Circular*, 1966. Minor modifications.
For 1977, *N.W.T. Home Statistics*, slightly modified by inclusion of "Back to the Land" data. June 1st.

*One must remember that around half of the settlements do not have municipal status. See Tables 3.3 and C-3.

From the present day to 1985, we foresee some minor changes for Class A due to the influence of the "Back to the Land" movement; Class B will probably be reduced a little to the benefit of those groups immediately superior to it and finally become fixed at approximately 8.5 per cent of the total population. We have not made the hypothesis of a new major industry before 1985, and so those classes of population with more than 750 individuals will grow primarily by natural increase, and, somehow, by minimal net-migration from outside as well as interior rearrangement of northern people. Classes E, F and G will benefit more by the concentrated move than any other category. By 1985, more than one-fifth of the total population may be living in Yellowknife and nearly three-quarters of all territorial residents may reside in localities of more than 750 people. In 1961, one could have seen roughly one-tenth and one-third, respectively. The level of "urban" concentration projected for 1985 may be a little high, because high current data for June 1977 were used as one of the reference years.

When comparing Tables 3.1 and 3.2, as far as the total number of "settlements" is concerned, one will see a surprising increase — from 115 to 146. In fact, that gain refers almost exclusively to Class A, the classification with less than 50 people. Most of the settlements in that group are camp-type and only seasonally occupied; many are not officially recognized "settlements" as such.

With 66 predicted for 1985, they are fewer than in 1961 (128[1]. Indeed, during the next eight years, we envisage very few entirely new settlements of more than 50 people; we say "new" to distinguish these from a settlement that may be promoted naturally to an upper demographic class.

If one compares the 1961 and 1985 situations, he will note that the spatial structure of the ecumene has not radically changed; the N.W.T. will still have scattered settlements, northern type of deserted "moloch" or "môle" (as the Keewatin interior), and a few progressive settlements such as Hay River and Pine Point which are hinterland of some far southern heartland. The phrase of K. Stone, U.S. specialist in northern habitats: "an uninterrupted discontinuous settlement" will still apply in 1985.

Even if values given in Table 3.3 are only tentative, they show that an administrative effort will have to be made to respond to the frequent demand for status of "villages" and "hamlets" if the territorial administration continues its present "municipal" policy. Sites of these settlements already exist. The demographic evolution which can be observed in classes of localities goes hand in hand with the devolution program. The necessity for spatial extension of settlements has prompted one specific recommendation.

TABLE 3.2

Estimates of population by classes of settlements, current population, N.W.T., 1985

Classes	Population		Settlements
	No.	%	Approximate number[b]
A	993	1.6	66
B	5,273	8.5	36
C	10,856	17.5	23
D	12,097	19.5	13
E and F	18,818	30.3	7
G	14,000	22.6	1
Total	62,037[a]	100.0	146

[a]After Projection B. Total population has been allocated between classes of settlements according to projected percentages from June 1977.

[b]Calculation according to the settlement structure in 1977. For Yellowknife (Class G) see note, Table C-3.

MIDDLE NORTH AND FAR NORTH ZONES

The Middle North concept describes any northern area characterized by moderate nordicity. According to a northern index, the North Pole has 1,000 "polar units" (called VAPO), indicating ultimate nordicity.[47] The Middle North registered less than 500 of these units (but more than 200). The concept applies particularly to the northern part of the provinces. There is a zone inside the N.W.T. where mean annual northerness stands at a level of moderate intensity. That region, located at the southwest section of the Mackenzie District, extends from the 60° Boundary to the Great Bear Lake and from the Shield to the eastern rim of the Western Cordillera. In the N.W.T., those areas not located in the Middle North are in the Far North (or in the Extreme North). The entire Northwest Territories are in the "North", *stricto sensus* (see map). Any observer will realize that the population of the N.W.T. is rather well distributed between the Middle North (or Subarctic) and the Far North (or Arctic — an area with more than 500 VAPO). The N.W.T. is the only political entity in Canada to show such a distribution. Middle North and Far North are quite different regions when one considers the degree of nordicity, the various ethnic groups, the proportion of white people, the size of settlements and the intensity of the modern economy. Middle North and Far North are regional concepts which may be used as tools of definition for several purposes: for example, a. the extent of the Fort Smith administrative region could be limited to the Middle North: b. One (two by 1990?) federal MP's could very well represent exclusively the interests of the Middle North: c. The vast Far North and its conventional division of eastern and western parts could also lead to the creation of two federal constituencies in a few years.

TABLE 3.3

Comparison of the settlement situation, N.W.T., 1977 - 1985

Promoted members by class 1977 - 1985		Population change 1977 - 1985		Municipal status (only population factor is considered)	
Class	No. approx.	% approx.	Class	Absolute members 1977	Promoted members 1985 approx.
B	6	18.9	Sett. coun.	30	6
C	4	21.8	Hamlet	14	9
D	3	30.4	Village	2	11
E and F	2	32.4	Towns	4	3
G	same	33.3	City	1	same
	15 new units	Average 29.0		51	29 new units

Source: After Tables 3.1 and 3.2. Projection B.
Only settlements with more than 50 inhabitants are considered.

Table 3.4 gives indications of ethnic composition by zones. In the Middle North, white people already count for more than 70 per cent of the total population. Inuit do not live there naturally, and, for the last twenty years the Dene are outnumbered by southern immigrants. Demographic and economic changes have not been favourable to the Dene. This being so, a land claim settlement may present itself as a big chance for them. In the Far North, the situation is much less insecure for indigenous people. There, white people comprise little more than one-quarter of the total population; most residents are Inuit. It is the largest indigenous cultural territory (or, as the Inuit call it, *Nunavut*) in Canada. In the next eight years, the demographic increase will lower the percentage of Dene in the Middle North but not that of the Inuit in the Far North.

TABLE 3.4
Population of zonal divisions: Middle North and Far North, N.W.T., 1977 and 1985

	1977		1985	
Regions	Total No.	% Dene and Inuit	Total No.	% Dene and Inuit
Middle North	26,481	27	34,122	24
Far North[a]	21,590	73	27,915	75
Total/ average	48,071	48	62,037	47

Source: Calculation from N.W.T. Home Statistics for 1977 and according to the projected increase through Projection B for 1985 (Table 3.10). Rounded percentages.

[a]Includes the *Extreme North* which has a few hundred permanent inhabitants.

CENTRALITY: YELLOWKNIFE

To what is already known about Yellowknife, one of the most populated of northern cities, we apply both concepts of "primacy" and demographic concentration, which indicate that Yellowknife is engaged in a steady progression toward territorial dominance.

Primacy. This concept expresses how much, inside a regional unit, the largest community is greater in population than the second in size; following that, functional relationships between communities of all sizes have been considered. In the N.W.T., the absence of a real urban hierarchy makes any discussion of primacy somewhat academic. However, as far as only the numerical aspect is concerned, the evolution of the last twenty years has shown that the second largest settlement compared to the first has registered a decreasing percentage. In 1961, the population of Fort Smith was 52 per cent of the Yellowknife population. Later, for about ten years, Inuvik was second, with a percentage fluctuating between 55 to 45 per cent. In January 1978, Hay River attained that rank with 35 per cent. Yellowknife, the only "city" of the Northwest Territories, is the principal territorial community, but its dominance has not reached the level Whitehorse occupies over the Yukon. In its dominance over other urban centres, Yellowknife resembles the capitals of Alberta and Saskatchewan, although it is far from having the level of economic autonomy enjoyed by Edmonton and Regina. Considering the ethnic composition and main features of the four most populated settlements (Yellowknife, Hay River, Inuvik, Fort Smith), one may discern some basic elements of urban territorial structure.[48] Those centres which are first or second in rank are inhabited mostly by white people.[49] They are located in the Mackenzie region and are particularly vulnerable to major developmental decisions imposed on them from outside. Serving as distribution centres and even interlocutors for southern Canada, these localities are nevertheless becoming nuclei of small and imperfect *umlands* (city regions). The developing northern urban structure follows the southern model. In the N.W.T., Yellowknife has a dominance greater than its demographic superiority over the second largest town may suggest.

Urban concentration. According to the number of inhabitants, Yellowknife is far from 100,000 individuals, which is the minimum size for a Canadian metropolitan centre. Nevertheless, a decisive concentration of population is at work. Between 1956 and 1966, Yellowknife represented around 14 per cent of the total N.W.T. population. Ten years later, that value reached 22 per cent. The demographic fluctuation in the capital is more dynamic than is the general territorial population: from 1970 to 1977, the yearly population increased by only 3.6 per cent compared to 8.8 per cent in the city of Yellowknife.

Such a rapid increase in the urban rate cannot be explained by natural increase alone, notwithstanding age structures. In fact, net migration was by far the major factor up to the Second World War and since 1967. Table 3.5 shows that the difference between births and deaths accounted for only one-third of the increase during the years 1966 to 1976, a proportion which was quite the reverse of the N.W.T. as a whole. Yellowknife attracts many more people to it than other areas of the N.W.T., the unusual increase being linked to its capital city function. During the last ten years, the majority (62 per cent) of all territorial net-migrants moved to Yellowknife. If that concentration of migrants is to be confirmed on a long-range basis, there is cause for concern for what could be regarded as excessive centralization. Such a concentration would create serious housing problems, even though Yellowknife, connected as it is by road to southern Canada, benefits from a more reliable supply of building materials than most other territorial communities. Also, it will be a case for greater municipal authority.

Unless care is taken, an overly concentrated political power may develop in the capital to the detriment of evolution in the subregions. Administrators recognize the danger and a program of political devolution was begun in 1976.

TABLE 3.5

Demographic evolution, current population, Greater Yellowknife, 1966-1976

Period	Population at the beginning[a]	Natural increase[b] No.	% [c]	Net Migration No.	% [c]	Population at the end[a]	% net migration GYK in N.W.T.[d]
1966-1971	4,415	739	27.5	1,946	72.5	7,100	154
1971-1976	7,100	1,169	41.0	1,681	59.0	9,950	60
1966-1976	4,415	1,908	34.0	3,627	66.0	9,950	62

Source: [a]N.W.T. Home Statistics.

[b]*Report on Health* (and small adjustment for migrants).

[c]Refers to the total increase during the period.

[d]For Territories, Family Allowances Data through *Statistics Canada*. The percentage is approximate only.

By 1985, because we expect that Yellowknife will retain its primacy — and more transfer of government personnel from Ottawa is likely to be a major factor — one may expect the capital to incorporate 23 per cent (Table 3.2) of the territorial population, corresponding to 14,000 inhabitants.[50] To appreciate how intense such a centralization trend may be, two approaches may be useful: a. compare the percentage of regional population with the level of centralization in other areas of Canada: the value obtained will still be about half that of 13 Canadian capitals, so the Yellowknife centrality will appear moderate; b. or, compare the cultural profiles of Yellowknife with the rest of the Northwest Territories, in which case the capital will appear to be very much "white", "southern", and primarily a temporary sojourn for transient workers. Yet this phenomenon is only one feature of territorial demography, and Yellowknife will probably continue to be atypical of the Territories.

THE "BACK TO THE LAND" PROGRAM

In his address to the Legislative Assembly of the Northwest Territories, Commissioner Stuart Hodgson made known in January 1974 that some Indians from Fort Resolution wanted to go back to their traditionally occupied area of Rocher River. Other native groups had already declared similar intentions. These legitimate wishes and other considerations led to the organization of an Outpost Camp Program (herein called OCP). Subsidized camps grew up very quickly in isolated areas, from 0 in 1975 to around 55 in 1977. The administration is properly concerned by the overall financial burden, the apparent permanency of would-be "temporary" settlements, the low level of social services to "campers", and the allocation of funds invested in the program.

To appreciate the popularity of OCP one must keep five considerations in mind: a. The practice of scattered camps has very deep roots in native cultures. Migratory habits are "new" only in the sense that now such movements must be financed by government. Before the arrival of white settlers there were hundreds of active small camps. That basic tradition has been threatened by a policy of centralization through trading posts, missions, administration, and the distribution of services; however, camps, and the concept of camping, have not disappeared. Statistics themselves, relating almost exclusively to "organized" communities, have helped to foster a false conception of the exact number of settlements.[51] One of the results of OCP has been to show that the northern ecumene still has a scattered appearance. The official demographic concentration was greater than the mental resistance to it by native people would have suggested. OCP is the expression of strong indigenous traditions. A Dogrib member of the program stated: "As far as I remember being young, I always went out [into the bush] with my father."[52] b. The Government of the N.W.T., like other northern governments, must remind itself that they often displaced native groups; Resolute Bay, Grise Fiord, Churchill (Manitoba), Eskimo Point, Povungnituk (Quebec) being examples.

OCP may be regarded by native people as another subsidized exercise in internal migration. c. To justify the bush camp, one should recall the Federal Government's national objective in the North: "to provide for a higher standard of living, quality of life and equality of opportunity for northern residents by methods which are compatible with their own preference and aspirations."[53] d. At a time when native people are negotiating their various land claims, it is in their interest to go back to the land and show that they have not lost their ancestral skills. The popularity of the OCP is partly linked to the present land claims situation. e. White people, in a completely different economic system, are also operating temporary camps (for example, prospecting camps, "shift-work" camps); some of these camps are situated inside the 300 km marine ring. Indigenous workers are able to participate in some of these schemes. The Federal Government, through Panarctic or other such agencies, pours public money into these frontier camps. The foregoing five considerations lead us to believe that the "Back to the Land" movement is to be taken seriously and, in any event, could hardly be stopped, even by making financial assistance more difficult. Those native groups which profit by the OCP are reacting normally to demographic concentration; the movement may be seen as an expression of disappointment at unemployment and the schooling system. The OCP is more than "another welfare program".

The position taken by the Territorial Government regarding the growth of these camps was neutrality. Growth of the camps was not discouraged, because it was felt that native groups might interpret any attempt on the part of the Government to do so as an attempt at forcible assimilation. Neither was their growth encouraged on a large scale, since costs for fully servicing such outpost camps were prohibitive. However, this view has changed. According to the new program, native groups who are interested in establishing such camps must apply for funds to the Executive Committee, and it is understood that dwellings constructed in such camps are to be non-permanent, seasonal residences. To ensure that this condition is met, no municipal services or emergency medical and police services are provided.

Only $50,000 was allocated for the total program budget during its first year of operation. In response to the conditional clause, Dene and Inuit groups claimed that the Government's minimal level of financial support for outpost camps was evidence of the Government's desire to restrict natives to one way of life — that of the community — and that this represented a disregard of their need to preserve their cultural values and norms. During the 1976-77 fiscal year, the Federal Government expressed an interest in the program, and in response to its support the budget was increased during that fiscal year to well over $200,000.[54]

How drastic could that movement be, demographically? The best way to estimate the future of the trend should come from historical statistics, but they are scarce, even for the recent past: "No one can provide a clear picture of the participation of the native people in the traditional economy on the basis of the available information".[55] Estimated figures suggest around 3,000 individuals (family heads and children) in 1960, and approximately 1,500 ten years later, the last figure representing 8.3 per cent of native people. A 5 per cent value would include 1,236 persons in the program by 1980, which seems to us to be a low figure for potential "campers". In any event, the actual number of participants (approximate figure of 700 for winter '77-'78) accounts for 57 per cent of that minimum evaluation. There will be other requirements for the movement has not yet reached its climax.

If we can use the 1976-77 percentage to estimate the future number of juveniles among these 1,236 potential "campers", we arrive at 694. These youngsters will not be in a position to receive regular schooling. This total of 694 children accounts for less than 10 per cent of the native enrollment in primary and secondary schools. Only part of these 694 children are of schooling age.

Unfortunately, statistics do not give the number of young adults who have decided to live off the land, but it is known to be low.[56] In fact, demographically, the "Back to the Land" movement may seem a minor event. It is surely not so when considered in the sphere of territoriality. We will concentrate in this report on the number of settlements (not considering the psychological side of territoriality). Camps were 31 in 1976 to 1977, 55 in 1977 to 1978: an increase of 74 per cent. The mean number of inhabitants per camp is 13, so we calculate that 1,236 potential campers in the next few years should produce 95 campsites. As far as we understand the situation in the recent past, that number, while it may be realistic, is low. In any event, it means that OCP now subsidizes about half of the camps. So, requirements appear to exceed the present efforts of the administration. If the program reaches 95 camps, these very small localities will count for half of the total number of settlements in the N.W.T.[57] This, in turn, will produce a drastic change in statistics in which localities with less than 15 people account for only 10 to 15 per cent of inventoried communities. It is evident that outposts are not intended to become permanent sites, but, nevertheless, some will. The Government may have difficulty in keeping to its objective: "It must be pointed out that Outpost Camp Assistance is not being provided for the purpose of establishing new settlements."[58] Camps occupied during at least 8 months of the year in 1975 and 1976 were 19. In 1977-1978, according to N.W.T. statistics, there were two sites of at least 50 people: Allen Island in the Far North and Snare Lake in the Middle North. Another element of the trend towards duration is that a majority of "parent communities" which have embarked on the program during the first year have continued to participate in the second year. For the near future we foresee that, through OCP, several dozens of sites may be officially recognized as temporary camps, and of them, at least a dozen may become permanent small settlements.

This scale coincides with an assumption that only 5 per cent of the native population will be interested in the OCP, taking into account specific restraints imposed by the program, competition by social assistance, and the gradual breaking of traditional customs in the last few decades. Considering testimony heard by the Berger Commission (1,075 trappers in the Mackenzie) and attitudes taken towards the land by groups of native people such as those in Old Crow (Yukon Territory) and Igloolik, one could make an hypothesis that 10 per cent (instead of 5 per cent) of N.W.T. natives may be willing to participate in the "Back to the Land" program. According to the present demographic distribution of these camps, one may anticipate a number of sites well above 100 as well as the possibility of around 20 new, small, and permanent settlements, to be recognized as such.

Financially, that type of evolution will produce a heavy burden. The main cost will not come from factual subsidies to "campers" themselves but will be attached to structural organizations of habitat as well as compiling a detailed inventory of local renewable resources. In the N.W.T. *Debates*, June 1978, some Members complained that organized hunting by airplane from the cities has depleted the caribou herds, thus challenging the objective of living off the land.

Another problem is the control of such camps. Of course, the total number of units (annual camps, seasonal camps and permanent small settlements) will likely be determined by financial considerations. Conflicts may arise because natives may demand that all types of camps be directly supported by governmental budgets. The question of control may also arise regarding internal management of the camps; here, a guiding principle should be to let native organizations take the greatest share of responsibility. The possibility of a land claims settlement will drastically change the "Back to the Land" movement, which will then put control almost exclusively in native hands.

TABLE 3.6
Evolution of the Outpost Camp Program, 1975-1980

Year	OCP participants No.	Campsites No.
1975[a]	0	0
1967-77[b]	393	31
1977-78[c]	705	55
Immediate potential[d]	531	40
Total[e]	1,236	95

[a]No camps subsidized by the Program.

[b]N.W.T. Home Statistics.

[c]Approximate data. N.W.T. Home Statistics.

[d]Low estimate. "Immediate" means the years 1978-79 and 1979-80. Value deduced from the present situation.

[e]Winter 1977-78 plus immediate potential.

ETHNIC DISTRIBUTION WITHIN POPULATION

One area in which conflicting statistics give rise to discussion is the ethnic composition of the population. Neither the native nor white people wants to be seen as a minority. "Ethnicity" has two major aspects, relative to numbers of people defined by "race" or by language, and to their consciousness of belonging to a group. With respect to the quantitative aspect, one may be satisfied with usual accounts or he may seek other data.

THE RECENT SITUATION

Official statistics reveal a decreasing percentage of native people in both permanent and current population groups. After *Census*, indigenous peoples comprised 78.6 per cent of territorial residents in 1941, but only 53.4 per cent thirty years later.[59] Now, white residents and native people account for about 50 per cent, respectively, of the total population; in fact, there are variations in the relative percentages depending upon the sources used: e.g., the *Report on Health* gives as much as 57.4 per cent for native people in 1971, 4 points more than the *Census*. Those who utilize the permanent population concept put the native population at more than 50 per cent, while those who consider the current population concept arrive at a figure of less than 50 per cent — the difference between the two systems amounting to approximately 4 per cent. Development of the North will possibly disrupt the present even distribution of population. The concept of "openness" (ratio of white people to total population) has also been used.[60]

Many of the figures on ethnic distribution will be partly outdated by anticipated statistics on the Metis people.[61] With this added information, Indian (Dene) and "Others" (mostly whites) will see their own percentages lowered. By how much? Probably, a few percentage points.

The respective proportions of the various ethnic groups inside the four administrative districts are not uniform. Inuit have the lead in the Keewatin and Baffin Districts, white people in the Fort Smith and Inuvik areas; Dene and Métis do not lead in any area. However, there is a higher percentage of Dene in the northern part of the Mackenzie Valley than in its southern part; for the Métis, such a distribution is the reverse.

TABLE 3.7
Current languages, adult population, main settlements, N.W.T., 1975

Categories	Number of settlements		Total population %
Inuit	32		32.0
Dene	20	(Slavey 10, Loucheux 4, Dogrib 3, Chipewyan 3)	19.0
English	7[a]		46.5
French	0		2.5
Total	59		100.0

Source: *Canada North Almanac* (sic), Yellowknife, 1975 and N.W.T. Home Statistics.

[a]These major localities are Yellowknife, Hay River, Fort Smith, Inuvik, Pine Point, Norman Wells and Fort Simpson. If one considers all settlements (115 in 1977), the number of native-speaking communities is greater, but there are also other English-speaking localities such as Port Radium, Tungsten, Enterprise, Nanisivik, Rae Point and Alert. English is spoken in every native locality, particularly by young people, and some French, spoken by adults, in a few localities.

Much less is known at local levels. In the communities this 50-50 division seldom exists. In most localities, the main language is one or another of the Amerindian systems. The concentration of white people in a small number of settlements explains why there are fewer dominantly English speaking localities than settlements

where native tongues are widely spoken (Table 3.7). In some settlements such as Inuvik, Rae-Edzo, Aklavik, Detah, Frobisher Bay, Norman Wells, Fort Smith and Yellowknife, one may hear linguistic tracings pertaining to three, four or five languages. Around 70 per cent of all N.W.T. communities are mainly composed of native people. In March 1975, nine out of fifteen elected Members of the Territorial Legislative Assembly were of native origin. Seventy four per cent of all councillors in the 63 N.W.T. municipalities are Inuit and Dene.[82] There is a project in the Department of Education of the Territorial Government to consider four Indian grammars for the Mackenzie Valley alone. These facts give to many indigenous adults the impression that they are still a comfortable majority in the Territories.

As far as ethnic composition is concerned, the N.W.T. is much different from southern Canada, from most of the provincial Middle North and even the Yukon. The N.W.T. embraces a multiplicity of cultures. This very fact seems never to have been realized for its real merit; thus, many educational and social policies, programs or experiences, in the past have had only qualified success.

FROM 1976 TO 1985

We offer some indications on the evolution of ethnicity. "Others" include Métis, whose number may be 2,000. According to Table 3.9 which is confined to the permanent population, native people will make up 49.7 per cent of the total population by 1985. The gradual decrease in numbers of native people may be followed through Tables 3.8 and 3.10, which concern the current population. From 1966 to 1985, the percentage of native people will have decreased from 53.3 to 46.7 per cent or, by 7 per cent. During the years to come, Dene and Inuit together will lose their majority position within the N.W.T., taken as a whole. The political consequences of this development must be a cause for concern.

Indeed, Dene and Inuit situations have to be considered separately. From now until 1985, the latter will have a much greater rate of increase than the former (3.73 vs. 2.16). By 1985, the number of Inuit will be double that of the Dene. Viewing all ethnic groups together, such evolution means that Dene and Inuit will respond to white immigration in quite opposite ways: the Dene in the Middle North will become more and more quickly a minority; demographically, the dynamics of the Inuit inside the Far North will delay the process of regional "minorization".

Tables 3.8, 3.9 and 3.10 are based on the loose concept of "racial" origin. If one considers languages spoken, he will find that Amerindians occupy a much lower proportion. After the fifties, the schooling system, adult mortality and forms of modernity have produced a drastic reduction in the use of native languages. Around 1970, the trend was already clear: 11.5 per cent of people of 15-24 years of age spoke "native language only" but 65.2 per cent of the 45 and over group could do it.[83] Evolution comes from the youth and the percentage of native tongues spoken increases with age; in 1976, for people less than 30 years old, the value was 15 per cent, but it reached 30 per cent for people 45 to 65. Amerindians are coming to be characterized more by cultural facies than by traditional languages spoken by most. "Nations" are changing their current tongues. However, statistics on which that trend is underlined are far from complete.

TABLE 3.8
Ethnic composition, current population, N.W.T., 1966-1975

Year ending December 31	Natives[a]		Others[b]		% natives in total population
	No.	% annual change	No.	% annual change	
1966	16,808		14,702		53.3
1967	17,261	2.7	15,452	5.1	52.8
1968	16,708[c]	-3.2[c]	17,513[c]	13.3[c]	48.8[c]
1969	17,355	3.9	18,722	6.9	48.7
1970	18,018	3.8	20,765	10.9	46.5
1971	20,086[c]	11.5[c]	21,363[c]	2.8[c]	48.5[c]
1072	20,518	2.1	22,839	6.9	47.3
1973	21,032	2.5	22,835	-0.02	47.9
1974	21,465	2.1	23,407	2.5	47.8
1975	21,981	2.4	24,305	3.8	47.5
Increase	5,727		9,564		

[a]Inuit and Dene. Source: *Report on Health Conditions . . .*

[b]Mostly whites. By calculation: total current population (Table 1.6) minus natives.

[c]Probable influence of inexact statistical information.

TABLE 3.9
Ethnic composition, permanent population, N.W.T., 1976-1985

Year ending December 31	Dene	Inuit	All native groups	Others	% natives in total population
1976	8,310	13,922	22,232	20,922	51.5
1977	8,464	14,350	22,814	21,656	51.3
1978	8,621	14,797	23,418	22,438	51.1
1979	8,784	15,269	24,053	23,251	50.9
1980	8,959	15,766	24,725	24,093	50.7
1981	9,140	16,284	25,424	24,967	50.5
1982	9,330	16,827	26,157	25,880	50.3
1983	9,527	17,394	26,921	26,825	50.1
1984	9,727	17,981	27,708	27,808	49.9
1985	9,937	18,592	28,529	28,826	49.7
Yearly change %	2.2	3.7	3.2	4.2	

[a]Calculation made before the census on Métis population; results still to be known in 1978.
Projection A.

TABLE 3.10
Ethnic composition, current population, N.W.T., 1976-1985

Year ending December 31	Dene	Inuit	All native groups	Others	% natives in total population
1976	7,812	14,723	22,535	23,965	48.5
1977	7,954	15,172	23,126	24,816	48.2
1978	8,105	15,651	23,756	25,704	48.0
1979	8,259	16,151	24,410	26,635	47.8
1980	8,420	16,679	25,099	27,600	47.6
1981	8,590	17,228	25,818	28,602	47.4
1982	8,765	17,800	25,565	29,648	47.3
1983	8,947	18,398	27,345	30,737	47.1
1984	9,137	19,022	28,159	31,861	46.9
1985	9,333	19,672	29,005	33,032	46.7
Yearly change %	2.2	3.7	3.2	4.2	

[a]Calculation made before the census of Métis population. Métis may represent about 4 per cent of the total population. Cf. Table 3.8.

Projection B.

SEX AND AGE

SEX RATIO

The sex ratio is calculated by dividing the total number of males by the total number of females and multiplying the result by 100. Table 3.11 illustrates two facts: firstly, the relatively high level of the sex ratio due to in-migration of many white males. Censuses 1971 and 1976 and our projection for 1985 show a surplus of males in each five-year age class. The sex ratio at birth is variable (at least what the record reveals of it); for the 1973-1976 period, it was of 113.7 for Inuit;[84] secondly, the decrease of values since 1961 (and before). They have not yet reached the low (99.2 in 1976) Canadian level. The N.W.T. still have a sex ratio which is higher than that shown by the post-industrial nations.

TABLE 3.11
Sex ratios, permanent population, N.W.T., 1931-1985

Year		Sex ratio
1931		116.0
1956	*(Census)*	139.0
1966	*(Census)*	118.0
1976	*(Census)*	111.3
1976[a]		109.2
1977[b]		109.2
1985[a]		106.9

[a]Projection A.
[b]N.W.T., *TERIS*, Yellowknife, 1977, p. 9

CATEGORIES OF AGE

Considering the three main categories limited by the years 15 and 65, one may see, from Table 3.12, that the N.W.T. population has become "younger" during the third part of this century; in 1971 nearly 43 per cent of the total population was under 15 years of age. The trend has altered during the seventies (in fact, a few years before) in response to modifications in growth factors. In accordance with that recent change a general increase in average age of population is expected (Tables 3.13, 3.14 and 3.15 from Projection B). In fact, aging may very well be a little higher than what is shown by our projections, which have probably underestimated the age classes 20 - 30 due to the inadequacy of data.

Between 1977 and 1985, the number of individuals from 0 to 14 years old will increase by less than 3,000, representing a rate of growth lower than that of the total population, and thus, the proportion of young people will be reduced. Among the three ethnic groups, Inuit will have the higher percentage of youngsters (Table 3.14). Should one compare permanent and current population data, the values change only slightly for the same years.

On the other hand, those between 15 and 64 will increase by 10,000, at a rate higher than the rate for the total population (Table 3.15). The number of people seeking jobs will grow drastically. Among the three ethnic groups, "Others" have the higher percentage of people in the age group 15 to 64 due to in-migration (Table 3.14).

TABLE 3.12

Variations in age composition of the permanent population, N.W.T., by per cent, 1951-1976

Age Categories	1951	1956	1961	1966	1971	1976
0 - 14	36.4	36.3	40.1	42.5	42.9	40.0
15 - 64	60.9	61.2	57.3	54.8	55.0	57.2
65+	2.7	2.5	2.6	2.7	2.1	2.8

Source: *Census of Canada.*

TABLE 3.13

Categories of age by ethnic group, current population, N.W.T., 1977

	Dene		Inuit		Others		Total	
Group	No.	%	No.	%	No.	%	No.	%
0 - 14	3,120	39.23	7,030	46.34	8,521	34.34	18,671	38,94
15 - 64	4,395	55.25	7,788	51.33	15,706	63.29	27,889	58.17
65+	439	5.52	354	2.33	589	2.37	1,382	2.89
Total	7,954	100.00	15,172	100.00	24,816	100.00	47,942	100.00

Projection B.

TABLE 3.14

Categories of age by ethnic group, current population, N.W.T., 1985

	Dene		Inuit		Others		Total	
Group	No.	%	No.	%	No.	%	No.	%
0 - 14	3,096	33.1	8,178	41.6	10,208	31.0	21,482	34.7
15 - 64	5,648	60.6	10,799	54.9	21,464	64.9	37,911	61.1
65+	589	6.3	695	3.5	1,360	4.1	2,644	4.2
Total	9,333	100.0	19,672	100.0	33,032	100.0	62,037	100.0

Projection B.

FIGURE 3.2

Categories of age, N.W.T., 1951-1985

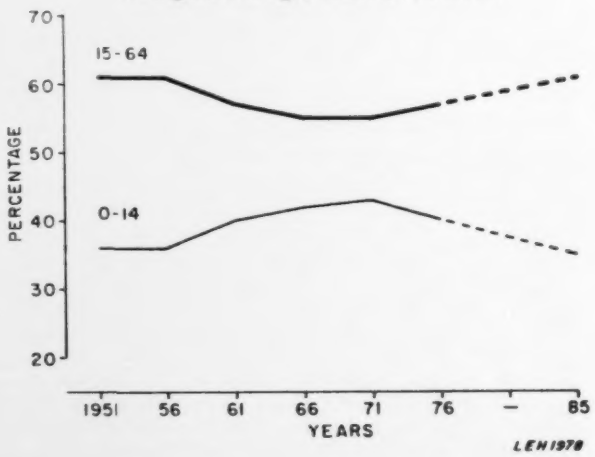


TABLE 3.15

Changes by age and ethnic groups in current population, 1977-1985

Categories	Dene		Inuit		Others		Total	
	No.	%	No.	%	No.	%	No.	%
0 - 14	-24	-0.7	1,148	16.3	1,687	19,8	2,811	15.0
15 - 64	1,253	28.5	3,011	38.6	5,758	36.6	10,022	35.9
65+	150	34.1	341	96.3	771	130.9	1,262	91.3
Total	1,379	17.3	4,500	29.6	8,216	33.1	14,095	29.4

Projection B.

TABLE 3.16

Evolution of the crude dependency ratio, current population, N.W.T., 1977-1985

Groups	Value 1977		Value 1985	
	Inuit	N.W.T.	Inuit	N.W.T.
Less than 15	79.9	66.95	75.7	58.6
More than 65	4.5	4.96	6.4	6.9
Total	94.7	71.91	82.1	63.6

Source: Tables 3.13 and 3.14

The number of northerners over 65 will increase.[65] However, the total volume of population will still be small — less than 2,700 by 1985. Among the three ethnic groups, Dene have the highest percentage (Table 3.14). The N.W.T. have to prepare themselves to cope with this new situation, and concern has already been expressed in the Legislative Assembly with respect to the problem.

From a sociological point of view, Dene and Inuit will evolve in a very different mental milieu. The low number of children among the Dene and the high number among the Inuit will create two systems of child socialization. The phenomenon of "youth culture" is likely to appear stronger in Inuit rather than Dene populations. However, the departure of that culture from types of socialization defined by adults is not only a function of respective numbers in categories of people. Isolation, pressure from outside, consciousness of problems, level of sophistication of leaders, and group organization are other determinants.

Each age group and each ethnic group will have their own behaviour.

DEPENDENCY RATIO

This value expresses the numerical relation of those who are of working age with those who are not; these two age groups are often incorrectly named "producers" and "consumers". There are three dependency ratios: the "youth dependency ratio" (for those who are less than 15 years of age), the "old age dependency ratio" (for 65 years and over) and the "overall dependency ratio" (both groups). To calculate any of these ratios, one divides the members of any dependent group by the number of people from 15 to 64 years of age, and then multiplies the results by 100. Values for the overall dependency ratio which were high (71.9 per cent) in 1977 will decline by more than eight points. Strictly speaking, such a general diminution is caused by the evolution of the youth dependency ratio which will drop by ten points (from 1977 to 1985). On the other hand, the old age dependency ratio is going to increase. The explanation for these differential slopes can be found in the general increase in mean age of the population, the lowering of the fertility rate up to 1974 and the positive net migration. Each ethnic group has its own characteristics. By 1985, the Inuit will have a youth dependency ratio as high as 76 compared to a value of only 48 for "Others" — the former having more children than the latter. As far as the old age dependency ratio is concerned, the Dene will have a value of 10, and "Others" 6.3; many white people leave the North before reaching the age of retirement.

Table 3.16 indicates a "crude" dependency ratio. First, there is the question of age limits. Some individuals of more than 15 are still dependent, and older people (over 65) may be relatively independent. Secondly, it is somewhat academic to relate youthful or aged dependents to adults between 15 and 64 who are supposed to be out of the dependency group. Many of these adults have a low participation rate in the labour force and are largely unemployed; in other words, they themselves are dependent. Calculation of a real dependency ratio for the North would be a much more complicated exercise.

PEOPLE AT SCHOOL

Table 3.15 from Projection B gives a general idea of the numerical evolution of young people. The number of individuals from 0 to 14 years old will slightly increase during the next seven years. To project the number of students, we follow the method used by John Reid: ". . . [of] applying enrollment ratios to the school age population. To determine these ratios, the number of students attending primary and secondary schools in 1975-76 was divided by the estimated total population for 1976 in each appropriate school age group. This [division] produced an enrollment ratio of .647 for the secondary school age population . . . and .95 for primary schools."[56] Primary school age is from 6 to 13 and secondary school age from 14 to 17. The student/teacher theoretical ratios are 22:1 in primary school and 17:1 in secondary school.

TABLE 3.17

School age population, school enrollment and number of teachers by ethnic group, N.W.T., 1985

Level	Ethnic groups	School age	School enrollment	Teachers
Primary	Dene	1,608	1,528	69
	Inuit	4,023	3,822	174
	Others	5,190	4,930	224
	Total	10,821	10,280	467
Secondary	Dene	817	529	31
	Inuit	1,813	1,173	69
	Others	2,410	1,559	92
	Total	5,040	3,261	192
Total Primary and Secondary	Dene	2,425	2,057	100
	Inuit	5,836	4,995	243
	Others	7,600	6,489	316
	Total	15,861	13,541	659

Data from Projection B.

Post-secondary education has not been considered.

For 1976, there is a slight difference between the number of students estimated in various age groups and the number of students presently in schools. This deviation may come from overcounting (taking as regularly attending students those individuals whose age indicates they are supposed to be in the classroom), from an inadequate enrollment ratio and imperfect data concerning basic age groups. Be that as it may, the rate of evolution from 1976 to 1985 would not be profoundly affected by the difference.

Main developments between 1976 and 1985 might be:

1. An increase in enrollment for students 6 to 17 by 14.3 per cent, or a yearly average of 1.6 per cent only; a value much lower than the growth of the total N.W.T. population. Since 1973, the growth of the student population is slight. There was a lower enrollment at the beginning of the 1977-1978 school year than at the end of 1976-1977.[57]
2. The increase in enrollment at the primary level will be low; Dene may even show a negative move. Nevertheless, in 1985, 76 per cent of all students will be at the primary level (1976 data showed 78 per cent).
3. A sharp increase in students at the secondary level will occur. Every ethnic group will register growth in that category of enrollment.
4. The majority of students (6 to 17) will be native, but that majority will drop from 56 per cent in 1976 to 52 per cent by 1985.
5. The ratio of Dene to Inuit will change. There will be 2.4 times more Inuit students than Dene students; by 1985, about 15 per cent of all children at school will be Dene.
6. The need for teachers reflects this evolution; the total number of teachers will grow at a moderate yearly rate of 2.5 per cent. The percentage is slightly higher than the one for total enrollment of students because more teachers will be required in secondary school than at the primary level. Of 121 or so *new* teachers, 76 (63 per cent) will work at the secondary level. However, by 1985, 70 per cent of *all* teachers (or 659) will serve in primary schools. Now, there are ". . . 33 native northerners presently teaching in school,"[58] data which correspond to only 10 per cent of teachers working in the predominantly native ecumene. The total number of teachers working among Dene and Inuit people should theoretically

be 343 by 1985 (52 per cent of all teachers). If there is to be a majority of native teachers in those schools where native people are dominant, it is evident that the number of native teachers will have to increase substantially.

7. School development will take place in two main areas: a. in the most populated communities in the N.W.T. Middle North (i.e. the Mackenzie Valley south of Great Bear Lake) where the great majority of white people reside, and, b. in the scattered Inuit ecumene of the Far North. One must remember that the actual growth of primary schooling will remain at a low-to-moderate level.

8. With respect to the number of new classrooms, and assuming 25 students per unit in 1985, compared to 1976, 68 new classrooms will be required, 40 of which will be at the primary level (an increase of 11 per cent) and 28 at the secondary level (an increase of 28 per cent). The total number of classrooms in 1985 will be approximately 541. The ratio of 25:1 is theoretical, because, of course, a compromise has to be made in many localities.

As far as the physical aspects of schooling are concerned, the years to come do not appear to demand efforts as great as were necessary during the 1967-1973 period, so that in the future, pedagogical problems and post-secondary education can be given primary consideration for all ethnic groups.

TABLE 3.18

Change in student enrollment in N.W.T. schools by per cent between 1976 and 1985

Level	Ethnic groups			
	Dene	Inuit	Others	All
Primary	-8.6[a]	9.8	19.8	10.6
Secondary	9.0	25.8	36.7	27.5
Total	-4.6[a]	12.6	23.5[b]	14.3

Data from Projection B.

[a] These negative values can be put in relation to diminution in the birth rate (before 1974) and with the fact that during the 1959-1971 period, Dene were the ethnic group showing the lesser increase of students. (*Survey of Education*, Yellowknife 1972, p. 115). Moreover, there could be some effects of changes in the rate of scholarization/age grade retardation and dropping out. Nevertheless, we could expect at the end of the period a series of low positive values for Dene. Had other years been considered in these calculations, one would have found a percentage closer to 0. Finally, one has never to forget the inadequacy of basic data.

[b] This high percentage reflects the influx of whites from 1967 and on.

EXTERNAL MIGRATION

Migrations are of two kinds: movements from place to place within an area (internal migration) and crossing external boundaries either way (external migration). We are concerned here only with movements of people into and out of the N.W.T.

ETHNIC DISTRIBUTION, TIMING AND MAGNITUDE OF MIGRATION

External migration affects white people much more than native people. The "medium net volume of annual net migration" was estimated at 0 per individual for indigenous people but at 250 for "Others", during the 1962-1970 period.[69] There is an indication that the yearly increase of the N.W.T. native population between 1966 and 1977 may come from an external migration rate of only 0.6 per cent. External migration is almost exclusively a white affair. For instance, in Hay River, only 3.4 per cent of white workers were born in the N.W.T.[70]

In and out migrations of white people have not always been at a steady tempo. For many years prior to 1955 net migration was not a major demographic factor, North of 60°. A great immigration period was observed during the years 1967 to 1973, predominantly for administrative and service activities. From 1962 to 1976, a total of 106,000 individuals migrated into and out of the N.W.T. (or, at an average rate of 7,100 per year: Table C-1).

A feature of external migration is that it is a simultaneous activity. The problem of the impermanence of the transient persists. In 1972, the Government of the Northwest Territories began the year with 1,940 employees; during the next twelve months it recruited 742 workers but lost 566, arrivals and departures representing two-thirds of the initial total.[71] Territorial employees are not the most mobile workers in the N.W.T. In the case of all migrants, about the same number of people come and go, every year, the small residue making up the net migration. Those who remain represent only 5.6 per cent of all in-migrants (Table C-1). Thus, populating an area in that manner is not a very profitable exercise. White people in the North are very mobile and may be distinguished from their American counterparts who tend to migrate less frequently than formerly.[72]

AGE AND ORIGIN OF MIGRANTS BY REGION

The new registrants in the N.W.T. Health Care Plan for 1975-1977 give the profile of territorial in-migrants. Three specific aspects may be considered:

First, from which regions do they come? The four western provinces lead with nearly 60 per cent of total migrants. Such a dominant influx gives to the Mackenzie Valley, particularly, a kind of western style. The

dominant provinces, Ontario (Ottawa) and Quebec, even if they make most of the decisions affecting the North, are not providing many pioneers. For the coming years, we do not expect this regional pattern to undergo any significant change.

Second, when do migrants move North? Of course, the time of registration does not strictly correspond to the time of migration. However, indications are clear that migration is adjusted to the rhythm of the working seasons. So, during five months of the year — May to September inclusive — 54.5 per cent of migrants register, leaving 45.5 per cent for the other seven months. Registration is greatest in August, least in February.

Table 3.20 gives the age-group profile of migrants. A very high proportion of transients is confined to working age brackets. Specifically, 43 per cent of in-migrants are between 20 to 30 years of age. Thus, most of the newcomers are potential workers. The percentage of 78.7 is more than 15 per cent higher than the corresponding value for white people already living in the N.W.T. Therefore, as far as the population structure is concerned, incoming white and "anchored" whites form different demographic constituents. Still looking at age groups among new registrants, the number of young and old people is small, if one compares territorial migrants with the N.W.T. population as a whole. Approximately 60 per cent of in-migrants are "not in families", which means either that they have single status or that the marriage has no children. If there are incentives to southerners migrating north so that they cease to be just transients, the age-structure of these new immigrants will resemble more closely the Canadian average. Then, the demographic pyramid will be characterized by the wideness of the middle ages.

Mr. Justice Berger's recommendation for a five-year residency requirement before applying for pipeline jobs will probably influence the residence pattern of migrants, although, it is unlikely that a trans-N.W.T. pipeline will be built before 1985.

TABLE 3.19
Origin by region of new registrants, N.W.T., 1975 - 1977

Categories	Percentage
Atlantic provinces	8.03
Quebec	6.34
Ontario	19.16
Prairie provinces	40.48
B.C. and Yukon	18.34
Other	7.65
Total	100.00

Source: N.W.T. Health Care Plan, Yellowknife, 1977.

TABLE 3.20
Age of new registrants, N.W.T., 1975 - 1977

Age categories	Percentage of new registrants	N.W.T. population Census 1976	N.W.T.[a] Others Census 1971
0-14	21.0	38.56	35.72
15-64	78.7	58.76	62.95
65+	0.3	2.68	1.33
Total	100.0	100.00	100.00

Source: N.W.T. Health Care Plan, Yellowknife, 1977. By percentage.
[a]No statistics available for age categories of "Others" in *Census* 1976.

PERSPECTIVES TO 1985

From the present until 1985, hypothesizing that the labour market will remain unplanned, we attribute an average of approximately 300 to 500 individuals per year to net migration. We say "average" because the range between values for good years and bad years may well be from 1,500 to -1,000 net migrants. From our experience to what has happened during the 1962 to 1976 period, we have estimated that the number of in-migrants may be equivalent to 1.5 per cent of white residents, or, to express it differently, out of 20,000 permanent individuals, there will be 300 new northerners. As Projection B takes into account more whites than does Projection A, the number of migrants is a little greater. Moreover, as it is 1.5 per cent of yearly population, the number of new northerners should register a small annual increase. But it could be a cumbersome experience. Without making preparation for migration, the N.W.T. might have to take in as many as 8,000 in-migrants in order to keep 500 of them permanently. Of course, the economic perspectives of any particular year will have a considerable influence on that ratio. However, even during the excellent years of 1970-71, the N.W.T. had to "try" 1,500 in-migrants in order to acquire 500 long-term territorial residents. The ratio of in-migrants to net migration has been about 3 in favourable years and 18 for the 1962-1976 period.

It may well happen that external migration will be second to natural increase, in determining population growth. To have a migration factor more important than natural increase, the N.W.T. by 1985 should admit approximately 1,500 net migrants per year — a much higher value than the average net migration during the last twenty years.

MANPOWER

There are real difficulties in conducting a study of the N.W.T. labour force, because appropriate analytical tools for assessing northern manpower have not yet been devised.

BASIC CONCEPTS RELATING TO THE 1967 - 1971 SITUATION

A look at the 1967 to 1970 situation gives occasion for determining some characteristics of that complicated labour market, without solving all anomalies. Fortunately, the results of a comprehensive manpower survey completed ten years ago are available to us, but much of the information, unfortunately, refers to both Territories.[73] Many data are incompatible with most of the usual (southern) concepts of labour demography.

public administration personnel in the territorial labour force reflects the cumbersome aspect of any northern administration, as well as state participation in resource development, the distribution of sophisticated services to the dispersed population, concerns for ecology and a relatively low proportion occupied by private business.

However, from 1967 to 1970 (and after), free enterprise has rapidly developed in some subsectors such as mining exploration, contracting, transport and construction.

Another research difficulty comes from the rate of participation of working age people in the labour force. Two sets of rates are used. Some researchers applied the Canadian rate to the N.W.T.[74] Others tried to make a

TABLE 3.21

Employment estimates by categories of work, N.W.T., 1967 and 1970

	1967		1970	
Non-governmental Sector		4,841		6,400
Mining	1,246		1,395	
DEW Line	680		600	
Merchants	445		483	
Construction	354		520	
Transport	339		526	
Mining Exploration	289		804	
Contractors	197		512	
Others	1,291		1,560	
Governmental Sector		3,206		4,975
Federal	2,792		2,511	
Territorial	263		2,264	
Others	151		200	
Total		8,047		11,375

Sources: G. Mauzeroll, 1973, pp. 1, 2, 7, 12 and 16.
J. Palmer, 1974, pp. 49 and 52.

Table 3.21 illustrates several points. First, the non-governmental sector appears to be more important than its political counterpart, even if as a unit, either government were the greater employer in 1970. The dominance of the non-governmental sector is linked with mining and its related industries (mining as such, mineral exploration and diamond drilling) which, with its 2,315 jobs, accounts for 36.1 per cent of that sector. The DEW Line is a very special employer. Some private fields like engineering, lumbering and manufacturing rate much lower than the national average. From 1967 to 1970, the main feature of the evolution of territorial employment was the transfer of the administration from Ottawa to Yellowknife (peak year: 1970); following that change one may observe a greater increase in the governmental sector (55.1 per cent) compared to the non-governmental sector (32.3 per cent). In 1967, the employment; the percentage increased by 4 per cent in the succeeding three years. The very high proportion of

distinction between ethnic groups in the N.W.T. In 1969-1971, indigenous people registered a percentage of 45.7.[75] Whites, heavily influenced by an activated in-migration factor had an estimated rate of 70 per cent and perhaps even greater. The labour situation must also be assessed according to sex. In 1969-1971, among native people, males participated at a rate of 74 per cent while females registered only 14 per cent. Also calculated are rates of participation vs. schooling; values are only 40.1 per cent of people with less than grade 9, but increase to 87.8 per cent for individuals with a university degree.[76] Table 3.25 shows variations in the labour force by age groups. Moreover, there is direct relationship between rates of participation and the rate of unemployment; to be considered "unemployed", an individual has to have been first recorded in the labour force. Thus, the low rate of participation among native people affects their rate of unemployment.

Unemployment presents itself as the most ill-defined and inaccurate concept, particularly when applied to northern native groups. We are not the first to realize the difficulty: "I do not pretend to know how many such persons [native people unemployed or underemployed] there are, and I venture to say that no one knows for sure."[77]

The inadequate employment concept leads to a misunderstanding of the northern reality. On the one hand, one may quickly conclude that "there are plenty of jobs for the working population" and "almost everybody is employed". Some statistics have even given a fictitious rate of overemployment. On the other hand, as the "wage" aspect is basic to the southern definition of employment, traditional occupations — trapping, fishing, hunting — which, as well, are self accounted, are not always tabulated. It follows that 15 to 20 per cent of all occupations held by native people may not be recorded. Thus it happens that statistics are inaccurate in that they produce too low a value for people presently at work while giving the impression that the rate of unemployment among native people is higher than it really is. Thus, we may expect three scales of long-range or regular unemployment: one for white residents (southern employment type), one for migrant or transient whites (southern employment type), and another for native people (seen together, southern employment type and northern occupation style). In our examples for 1970, we estimate unemployment rate variations from 1 to 72 per cent according to one or the other of these types (Table 3.24). The three specific rates give a combined northern unemployment rate of 22.1 which has not much meaning; moreover, that compound value expresses an annual situation; it does not correspond to the reality, which reveals wide variations from one "season" to another within the same year, both for native people (Table 3.22) and for whites. Approximate as it is, the entire territorial rate of unemployment appeared in 1970 to be four times the southern rate.

How do those rates given in Table 3.24 agree with what has been recorded elsewhere? Most of the reports have dealt with native labour supply (and unemployment) and white labour demand (for big developments) according to southern employment concepts. A clear distinction has to be made between native and non-native situations. Among white people, unemployment is low, particularly when one considers those whites who are only transient in the North and who maintain their permanent southern tax-return address.[78] These people are very mobile and do not remain in the North when unemployed. Resident white people are less mobile and they do suffer from some unemployment. For 1970 the mean unemployment among all categories of whites (residents and transients) would be in the order of 8.4 per cent — a little higher than the southern rate. It is worthy of notice that the average value of northern unemployment for whites is seven to eight times less than the corresponding value for native people. Some readers may regard the native unemployment rate, fixed at 59.2 per cent (in the case of a mixed economy), as low. It is in accordance with the results of the *Northern Manpower Survey* compiled for 1969-1971 which shows that employment which continued more than 10 months involved only 42.7 per cent of the work force.[79] Indeed, much higher rates have often been published: "The Eskimo population of Frobisher Bay in July 1966 numbered 1085 . . . 139 people were permanently employed."[80] Even though the rate of participation was low, the real unemployment rate was high. "A study estimates an unemployment rate of 45 per cent for native males in the Territories in 1972."[81] As women are much more seldom employed on the labour force, the total native rate should have reached 70 per cent: "It is estimated that 50 per cent [of the native male labour force] are not employed on a year-round regular basis."[82] Until more precise data and better research concepts are devised, a reconciliation of all rates of native unemployment will not be made. Most deviations find their roots in the nature of the surveys, in the responses obtained, in the consideration of non-wage occupations, in the rate of participation in the work force, in the length of employment and in the economic capacity of settlements.[83]

TABLE 3.22

Seasonal unemployment in the male labour force in six Mackenzie settlements, 1971-1972

Period	Percentage
November to Christmas	44
January to Break-up	15
Beaver/Rat or Goose Season	2
Mid-June to Freeze-up	36
Freeze-up to November	61

Source: *Gemini North Manpower Survey*, Yellowknife, 1972, Vol. III, p. 11. For 1977, see also, *Yellowknife, An Assessment . . . 1978.*

Another ethnic aspect of the labour force concerns the number of jobs filled by native people. Of course, results change with the denominators used. For the year 1970 natives who represent more than half of the total population permanently living in the N.W.T. (55.8 per cent) obtained only 22.6 per cent of all jobs (and only 15.5 per cent of wage jobs). These figures reflect, in a way, the rate of participation scored by non-native people compared to natives. Nevertheless, indigenous northerners are very much under-represented on the labour market. Efforts can be made to increase jobs for natives in the transportation sectors, social work and tourist industries. Moreover, pleas have been made for "nearer home, longer term and higher paying work."[84]

When considering the tables on labour, readers must remember that figures cannot be more accurate than are the statistics on which they are based. Nevertheless, these data show some of the fundamental characteristics of the labour situation and of how it evolves.

TABLE 3.23

Relative places occupied by native people on the labour market, N.W.T., 1970

Categories	Percentage
Total population	55.8
15-65 population	48.7
Labour force	38.3
Number of jobs (wage and "natural")	22.6
Number of jobs (wage employment only)	15.5

Source: Table 3.24
Permanent population considered here.

In the N.W.T., the following groups of workers have been identified: a. native people, which includes Inuit and Dene. White comprise two categories, which seem pertinent when considering unemployment, residency and mental nordicity. b. The wintering, long-staying, or "anchored" white people, those who are usually tabulated in *Report on Health* and in the *Census*. As a unit, these permanent white people command the highest share of employment in the N.W.T. (48 per cent in 1970). Even if they are fewer in numbers than natives when the total population is considered, permanent white workers are more than three times the total number of employed native workers. c. Lastly are the transient whites, who are tabulated in N.W.T. Home Statistics and who compose the non-indigenous sector of the "floating" population. With the transfer of government to the Northwest Territories (from 1967 onwards), this group has registered the most drastic change of any group during these years. In 1970, the ratio of all jobs reached 38 per cent, at a time of high in-migration: we estimate the value at approximately 32 per cent, six years later. The impact of external conditions on the North is once again being demonstrated. Nobody knows all of the specific fields in which transient white workers are employed but some of the main areas are governments, Crown corporations, exploration companies and professional counselling.

From 1967 to 1970, Table 3.24 also shows a great increase in the total number of man-years jobs, i.e., 9.7 per cent per year. This has produced a very high pressure on the supply of labour, and a greater part of the demand has been filled by non-permanent people. Permanent workers (white and native) who held 85 per cent of employable positions in 1967, were holding 62 per cent of these jobs three years later. It seems clear that during any developmental phase, transients quickly become numerous. These outsiders still compose a major part of the labour market. As it is now, evolution is not creating an appreciable improvement towards an equilibrium between supply and demand inside the N.W.T. labour market.

However, from 1967 to 1970, the rate of unemployment among native people has dropped somewhat, but not enough to produce a situation where the number of persons permanently employed could exceed the total number of unemployed.

This survey of the 1976-1971 N.W.T. labour market has given some indications with respect to the total volume of jobs, the various groups of identified workers (including transients), differential rates of unemployment, the specific position of native people and fundamental trends. The two most striking features are still the sustained high percentage of non-permanent white workers, and the level of unemployment among natives.

From 1970 to 1976, it seems that fields of employment which have grown most were the Territorial Government, transport, commerce and municipal administration.

TABLE 3.24

Tentative evolution of labour profiles by ethnic group, N.W.T., 1967 and 1970

Groups	Year	Workers		Long-term unemployment	
		No.	%	No.	%
Native people	1967	1,500	18.6	2,443	61.9
	1970	1,600	14.0	2,330	59.2
"Others" (permanent)	1967	5,364	66.6	492	8.4
	1970	5,459	48.0	861	13.6
Whites (transient)	1967	1,183	14.8	131	1.0
	1970	4,316	38.0	44	1.0
Total and average	1967	8,047	100.0	3,066	27.5
	1970	11,375	100.0	3,235	22.1

Sources: Total population: see note, Tables 1.6 and 3.8
Total employment: G. Mauzeroll, 1973.
Non-resident whites: J. Palmer, 1974. Working age: from *Census* or migration statistics, according to groups.
Participation: S. M. Meldrum and M. Helman, 1975, *Census. N.W.T. Manpower Survey, 1969-1970*. C.-Y. Kuo and C.-M. Lu, 1975, according to groups. Native rate of participation at 45.7 per cent.

Note: Other data are based on assumptions only.

THE LABOUR FORCE UP TO 1985

A large body of literature has dealt with the demand for labour that any big hydrocarbon project would create. Some concepts have been elaborated, such as "basic industries" (direct employment in the oil industry, governmental employment) and "non-basic industries" (as indirect oil industry employment, induced employment). From one report to another the very word "basic" is given more than one meaning, which produces difficulties when one tries to compare data. In some evaluations, traditional jobs undertaken by native people are left out. The rationale of this basic/non-basic (or service) dichotomy is expressed by a ratio of K which varies from 0.5 to 2.0.

TABLE 3.25
Distribution of labour supply by classes of age, N.W.T., 1976

Age	Percentage
14 - 19	12.2
20 - 24	15.8
25 - 29	17.2
30 - 34	15.4
35 - 39	10.4
40 - 44	8.3
45 - 49	6.8
50 - 54	5.5
55 - 65	7.1
Other	1.3
Total	100.0

Source: N.W.T. *TER 300*, Yellowknife, April 1978, pp. 22-23. These figures do not reflect 100 per cent coverage of the N.W.T.: W. Stevenson, Letter, May 5, 1978.

Note: The overall rate of participation appears to be over 70 per cent.
— Nearly half of the total refers to individuals of 20 to 35 corresponding to a "young" labour supply distribution type.
— Male and female. All ethnic groups.

Taking the following statement: "We are inclined to use a basic/service ratio in the order of 0.5 to 1.0", we could estimate with a ratio of 0.75, for 1986, a total labour demand of 21,893 workers.[85] Extreme values given by researchers are 18,767 (when K = 0.5) and 37,533 (K = 2.0) for projecting the number of people at work. Considering 21,893 potential workers, one realizes that the demand for labour exceeds its supply. It means that net migration must level off at 2,587 individuals (21,893-19,306); this figure is the minimum because it is unlikely that native northerners will be in a position to take all available jobs.

Consideration has been given to native participation in the labour market: "It has been said that the choice for native people is stark: jobs on the pipeline or no jobs at all. This statement is, of course, false because it overlooks the fact that for native people the opportunities provided by pipeline construction will be limited. Moreover, it fails to recognize the persistence of the native economy, the possibilities for development of the renewable resource sector, the continuation of oil and gas exploration activity and the role of the federal and territorial[86] governments as employers . . . Permanent jobs can be provided in logging and saw-milling, in the management, harvesting and processing of fur, meat and game, in fishing, in recreation, conservation . . . Nonetheless, all northern residents who want to work on pipeline construction should have that opportunity. I recommend that pipeline construction be accompanied by preferential hiring on the basis of five years' residence in the North."[87] Therefore, a "manpower delivery system" — a priority placement system — has been suggested.

The impact of a hydrocarbon project on any "action communities" can be expected to be gigantic. But we do not know when and where the big pressure might occur. By prior planning, a "Klondike-style" population deluge might be avoided. Nevertheless, local population will increase according to a "boom-and-bust" pattern. Labour requirements will be prodigious: "It is estimated that constructing a 48-inch gas pipeline through the northern Territories from the Alaska/Yukon border to the N.W.T./Alberta border would require for the first four years 21,000 man-years of labour.[88] Most of these temporary workers will settle in a few communities. In the case of such accelerated growth (compared to normal growth), the annual increase of the total population could be 2 to 4 times higher; according to optimistic estimates, Inuvik might experience an annual increase of as high as 14 per cent.[89] In such cases, the local permanent labour pool will be too low to produce the required manpower. These calculations are no longer of practical interest because the Mackenzie Valley pipeline project has been postponed.

Less subject to guesswork will be the supply of labour in the N.W.T. From 1977 to 1985, by percentage, the increase in the labour force will be greater than the total increase of the population for questions of the structure of age (Table 3.15); we can expect an even greater pressure than the present one for finding employment for these workers. The labour force will grow by 36.0 per cent. During the next seven years, at least 5,000 new jobs will have to be created (Table 3.26) in order not to increase the current rate of unemployment for natives and to maintain the migration anticipated in projections for whites.

According to Table 3.26, a total of 18,674 jobs is a minimum requirement for June 1985. If native people would register the same rates of participation and unemployment as whites, then 5,600 other jobs would be needed to cope with the territorial supply. Such a speculative and optimistic total number of workers (24,274) represents three times the active work force of 1967. Without large-scale economic development and actuation of the local economy, one feels doubtful about the possibility of having so high a level of employment in the Territories.

Even in the context of a wage economy, the employment

of native people is a major problem. Experiences at Rankin Inlet, Pine Point and Ross River, Y.T., have had unsatisfactory results. At Strathcona Sound, it is difficult to get the 111 Inuit workers, which number would correspond to the objective of 60 per cent of the total work force.[90] Dome/Canmar seems to have achieved better results in the Beaufort Sea communities.[91]

Finally, more indigenous people than one might expect are willing to enter into wage employment, but not at the expense of their northern life style. For most native people it is extremely unlikely that wage employment will soon become an exclusive source of income; for a while, wages will, instead, be only a part of what has been called a "mixed economy".

TABLE 3.26
Labour supply, N.W.T., 1977 - 1985

	Native people[a]			Others[b]			Total	
Year	15-64 population	Labour force	Probable workers[c]	15-64 population	Labour force	Probable workers[c]	Labour force	Probable workers[c]
1977	12,183	6,091	3,654	15,706	10,994	10,059	17,085	13,713
1978	12,727	6,363	3,818	16,370	11,459	10,485	17,822	14,303
1979	13,263	6,631	3,979	17,057	11,940	10,925	18,571	14,904
1980	13,804	6,902	4,141	17,755	12,428	11,372	19,330	15,513
1981	14,340	7,170	4,302	18,465	12,925	11,826	20,095	16,128
1982	14,870	7,435	4,461	19,191	14,434	12,292	20,869	16,753
1983	15,398	7,699	4,619	19,936	13,955	12,769	21,654	17,388
1984	16,025	8,012	4,807	20,685	14,479	13,248	22,491	18,055
1985	16,447	8,223	4,933	21,454	15,018	13,741	23,241	18,674

Source: Data from Projection B.

[a] If participation and long-period unemployment rates are 50 per cent and 40 per cent. Of course, a higher rate of participation and a lower rate of unemployment will result in a higher figure for the "active force". The program *TER 300*, Yellowknife, 1976, used higher values than those shown here.

[b] If participation and unemployment rates are 70 per cent and 8.5 per cent respectively.

[c] Men and women who could be employed, corresponding to the "active force".

HOUSING 1975-1985

For this subject, only indications as to future needs are given. According to the method used by *Gemini North*, the need for housing could be estimated as follows: in the Mackenzie Valley, the average occupancy rate was 7.37 persons per unit.[92] By 1985, the N.W.T. population should be 62,037 (our Projection B) requiring 8,417 housing units. Two additions to these findings can be made: a rate of attrition of 3 per cent per year and replenishing the existing housing deficit, which would represent 40 per cent of the present stock of residential units. Between 1975 and 1985, housing requirements are then estimated at 3,000 new units, or 300 per year, which seems to us to be too low an estimate.

Van Ginkel Associates used a national standard of occupancy fixed at 3.5; they distinguished reconstruction of present housing (by the year 2000) from housing for the new population.[93] Between 1975 and 1985, population growth will be 15,751 (Table 1.6 and Projection B). By that time the number of new units will increase to 4,500. To relocate the present population, Van Ginkel first considers the entire 1975-2000 period and then applies these results to the decade, 1975-1985. Using our data, we can estimate the requirements for those ten years at 5,289 dwellings — a total of 9,789 residential units, or 978 per year. These results may be interpreted as a desirable objective, but taking present housing capacity into account it is a high score, even if we consider that many recently constructed houses will not have to be replaced before 1985. Another way to estimate housing requirements is by first determining the expected number of new families. Projection B leads us to believe that there will be close to 4,000 such new families. To satisfy that need alone, 400 dwellings will have to be built each year.

However, three areas require specific attention. As Tables 3.15 and 3.16 illustrate, the number of young adults (which in turn influences the number of family units), and the number of senior citizens, will substantially increase; both groups will require more housing space than they have been given in the past. Moreover, even taking the scarcity of statistics into account, we can expect a great increase in the number of non-family dwellings; at the 1976 *Census* one household out of five was not "in-families". Looking at the housing problem from all angles we realize that an effort to increase construction must be made during each of the coming years. The long-term plan of the N.W.T. Housing Corporation, which calls for 3,625 units, then, is not excessive.[94]

CHAPTER FOUR

RECOMMENDATIONS

The following suggestions flow naturally from previously discussed considerations, or else were taken from one another of the studies conducted by our predecessors; we mention, particularly, the Institute for Northern Studies in Saskatoon, the committee on Northern Population Research in Montreal, the Northern Economic Development Branch in Ottawa, and the Department of Planning and Program Evaluation in Yellowknife. It is not our intention to reiterate any discussion with respect to the recommendations. Their field of application is intended primarily for the Northwest Territories, but some findings may also be pertinent to the Yukon or to the northern part of any of the seven provinces. Some recommendations do not arise from the projections themselves, but are linked with problems as yet unsolved, of which native unemployment is an example.

There are three sets of considerations. The first group of twelve propositions is devoted to politicians. Reference to matters discussed in the text are indicated in the left margin, according to labelling in the Table of Contents.

The second group is primarily for researchers, but politicial decisions have to be made first. Some of these recommendations have only indirect links with our text. However, most of these are based on what was said in Chapter One, Section A(b).

The last group of only three considerations discussed mental attitudes to be assumed by all persons interested in the North.

Readers who know the inaccurate state of demographic knowledge concerning the N.W.T. will not be surprised that many recommendations deal with research; they will remember also that the Government of the N.W.T. has a specific responsibility in that field.

TO POLITICIANS

III-B-a

1. **Municipal status.** The great increase in settlements of 750 to 1,500 inhabitants will lead to communities attaining the status of "village"; also, there will be an increase in number of "hamlets" and "towns". In some communities, these southern-type structures may conflict with native aspirations; we recommend moving with caution in this sphere. The Government of the N.W.T. will also have to be concerned with those many small localities which are still without local councils.

2. **Lands on the periphery of present settlements.** The increase of population will lead to occupation of lands surrounding presently inhabited areas, so a greater concern for their quality must be developed now. The Territorial Government must have overriding authority over these "ring" areas and pass agreements with local administrators. One specific need is for building lots.

III-E

3. **Schooling.** Ageing of the population will necessitate more new organizational efforts in the secondary schools than in primary schools. At both levels, government must be concerned with the wishes of the communities, and with the position held by people with respect to their cultures. Particularly, the increase in numbers of Inuit children invites reconsideration of the geographical location of technical schools open to them.[55]

III-D-b and c

III-H

4. **Housing. a. For the aged.** The relatively large increase of people over 65, together with the limited material aptitude of most families for keeping old people at home, invite government to set up special services for this sector of the population. These services must respect specific cultural customs of the varoius ethnic groups.

   b. For all people. The number of new apartments has been too low for several years; the shortage extends to at least 100 units per year.

III-G

5. **Unemployment.** Five thousand new jobs will have to be found to cope with evolution if present rates of participation and unemployment remain unchanged. There will be a massive increase in the number of people from 15 to 30 years of age — people either already on the labour market or likely to enter it soon.[56]

   Considering the low rate of permanent employment among native people, the situation will become more serious than it is now; particularly for young adults. The progression of this cohort through the population will not ameliorate the problem of unemployment in the immediate future. Having in mind such a massive supply of labour, researchers have suggested that new on-the-job training programs be organized. However, the whole system of native unemployment seems impossible to solve without a complete rethinking and reshaping of the N.W.T. economy. Otherwise, northern Canada will have to live with it.

III-F

6. **Special services for transient people.** According to registrations for the N.W.T. Health Care Plan, there were in 1976 alone, about 5,000 new registrants. The number of in-migrants varies every year, and the great majority of them soon leave. It is a major demographic event. In 1972, all migrants, moving both in and out, represented 36 per cent of the current population of whites and 51 per cent of the permanent population of whites. Such exceptional mobility has quick and profound repercussions in all social fields. The usual territorial "two-year budget" does not appear to be able to cope with that mobile situation, particularly in housing. We wonder if a lump sum of money, of course to be rigorously accountable, could not be set apart for facing that reality? Moreover, reception services should be set up in Yellowknife and Frobisher Bay which would serve as transient centres until temporary or final destinations for most migrants could be found. One of the duties of these services should be to keep detailed statistics on territorial in- and out-migration.

   Above all, information and incentive programs should be launched, first, not to attract those who do not intend to live in the North, and second, to prolong the stay of those immigrants. A regulated migration system seems to be badly needed.

III-B-d

7. **Outpost Camp Program.** The authors of this report are concerned about the reshaping of the territorial ecumene by rapidly increasing the number of subsidized small settlements. We recommend that studies should be made to determine the optimum number of N.W.T. settlements. These studies are now necessary in the light of new trends: Outpost Camps for natives and the "shift-work" system of companies or governments. Studies on "shift-work" localities have been made in Alaska and in the U.S.S.R. As far as Outpost Camps are concerned, the following items have to be considered: the legitimate wishes of native people to go on the land, governmental budgets, local biological capabilities, possibilities of sites for settling, liaisons with "parent" villages, the contribution to country food harvest, pollution, a lessening of services (e.g., schooling) among "campers" compared with what they could receive in a larger community. A kind of balance sheet concerning the OCP has to be written up. The whole question of the number of settlements has to be seen in the light of their evolution after cultural perspectives and technology have been considered.

   Territorial politicians must be prepared to vote money for maintenance of sites which are recognized as valuable. Some native people are much involved in the Outpost Program; we wonder if all aspects of it can be dealt with by administrators alone or even by Members of the N.W.T. Assembly? That body may consider itself to be in contact with native organizations. Other pertinent matters to mention in passing are information on biological reserves, additional cost for governments, minimum pollution regulations, awareness of consequences of education on the young, quality of life.

III-C

III-G-b

8. **Major concentration on ethnic studies.** We endorse this statement: "The realities of the North dictate that its population must be examined in terms of native and white peoples."[87] Even if the actual movement of the white population is not well known (i.e., concerning out-migration), demography on native people is indefinite; many studies have been undertaken according to southern concepts which can hardly apply to northern indigenous people. Therefore, a series of comprehensive studies on native people should be embarked on, but with the full support of those concerned.

   Indigenous settlements, as well as white settlements, need to know in some detail what their population is. Without these resources, planning and administration are so much conjecture. The native groups themselves have to be introduced to the concept of demography. As far as white professional researchers are concerned, they must be attentive to the wishes of native people with respect to those conditions under which Amerindians will permit outsiders to conduct their research. There is much more to the problem of good relations than confidentiality and the presence of one native person on a consultative committee. At the very least, reports made by white researchers should be made available in native settlements and in their languages (or a suitable abstract made of them or perhaps tapes).

   We recommend four specific socio-demographic studies on native people. a. The first, dealing with the "kabloonization" (a similar concept can also be applied to Indians and Métis); such an anthropological study could help to make more satisfactory definitions of the respective native groups. b. Another study would consider the aspirations of native people for more political power, "inside Canada". c. The trend towards the small involvement of native people in white enterprises. d. The study of a more satisfactory dual system.

   With respect to the white population, an ongoing study should be conducted on the "floating" population (i.e., non-permanent people, or short-term workers). Probably many kinds of individuals will have to be identified. In any event, these less-than-one-year northerners seem to inflate N.W.T.

population statistics by as many as several hundreds. When they do come, they create demands for temporary services. The floating population is part of the current population. The mental aspect also has to be considered. We endorse the following proposition: "In the interests of understanding and cooperation between ethnic groups, research should be undertaken on the attitude of white migrants to the North towards the native peoples and northern living conditions."[96] Those in-migrants who keep their southern address when they are in the North need to be better known and those who have the least propensity to become out-migrants should be identified.

About the Métis people, a thorough demographic study must be devised for completing some historical and anthropological studies already started, as well as the in-house survey made in Fall 1977 by the Métis themselves. Such information will be necessary for a land claims settlement.

III-C

III-E

9. **Cross-cultural system.** For a while, both native people and "Others" will make up about 50 per cent of the N.W.T. population. It seems urgent to facilitate in all northerners a knowledge of all other northern cultures. Groups living side by side are all too often unaware of each other's cultural richness. A profound change of attitude in this respect is more than desirable. As soon as possible, comprehensive cultural programs must be set up for all levels of population: for children in school as well as for adults in settlements. Responsibility for such a policy should be shared by both white and native citizens. These cultural programs cannot come from the official education system only. We specify that we are thinking beyond mere translation facilities.

II-B-a and b

III-B-b

10. **More MP's.** If one could accept the present ratio of 15,000 territorial people to one MP — three, and maybe four (instead of one, in 1978), members would have to represent the N.W.T. before fifteen years have passed. We are inclined not to apply the national standard pertaining to number of electors to northern areas, either territorial or provincial. The vast, multi-cultural North is insufficiently represented in the Canadian Parliament as well as in provincial legislatures; this situation seems to be less democratic and precludes the expression of legitimate opinion.

II-B-a and b

II-B-b

11. **More members for the Legislative Assembly.** If one could keep the present ratio of 3,000 inhabitants (slight increase of this number compared to 1975) to one seat in the Legislative Assembly of the Northwest Territories, ridings could be around 20 by 1986. Moreover, we suggest that the N.W.T. Government and citizens make more intensive use of the MLA's.

III-B-b

12. **Reshaping of territorial administrative regions.** There are regional inequalities in population increases — another factor in changing boundaries of western administrative areas. In ten years' time, the Fort Smith region would represent 60 per cent of the total population of the N.W.T., which would be an unbalanced concentration of people. The northernmost boundary of that region could be in the proximity of Lat. 64 or at the Middle North/Far North boundary. It is a slight modification of the present four regions. A specific study on territorial regionalization should be made.

TO RESEARCHERS

1-A

The North is part of Canada, and there is no justification for northern data being less reliable than its southern counterparts.

13. **Comprehensive plan for demographic studies.** We agree with the recommendation made by the Committee on Northern Population to the effect that one of the first steps in planning is to prepare a comprehensive demographic project for the entire Canadian North. In such a program, the N.W.T. should receive major consideration. Collaboration between researchers coming from different ethnic groups and disciplines is imperative.[99]

14. **1981 National *Census***. We recommend that the 1981 National *Census* be organized in such a way as to collect more and better data on the North.

Specific considerations are to be given:

a. to defining the basic statistical unit — in particular, *Census* subdivisions and enumeration areas;

b. to specific groups of people; Métis, southern migrants;

c. to particular questions such as spoken native languages, manpower and employment, northern residency, northern part of provinces.

Efforts ought to be made not only in Ottawa. Northern enumerators must be specifically briefed and northern people prepared to give accurate answers.

15. **N.W.T. Statistical Bureau.** Logically there should be only one centralized data service for all government offices. One sector of that body should be concerned with statistics on demography. The personnel ought to be specialized in that field, with northern experience and sensitivity in political matters. Present facilities have to be centralized and enlarged.

16. **Professional Library.** An all-department library should be developed to collect all kinds of documents: data, resource books, archives, maps, photographs, under a suitable system of classification. The library should be adequately staffed with professional personnel equipped to answer questions from a variety of sources. Some of the acquisitions should be concerned with demographic problems. Present facilities have to be developed.

17. **Historical handbook on recent demography.** We propose that a comprehensive statistical account be prepared from the year 1941 to the present (1973 was the first statistical yearbook of the N.W.T.), similar to the valuable work entitled *Canada*, edited by M. C. Urquhart and K. A. H. Buckley, Cambridge, 1965. Compilers must be concerned with the undercounting. Data from the recent past, and subsequent studies, will be necessary for improving the store of statistics, as well as advancing our understanding of present evolution in the N.W.T. This handbook ought to be prepared, not only from *Census*, but from all available sources.

18. **Annual censuses.** "In view of the short-term and medium-term variations, seasonal and annual censuses would be greatly preferable to ten-year or even five-year censuses. There is much too little premanence in the northern situation for one to be able to apply, at prolonged intervals, statistical tools designed to reveal trends in more stable situations."[100] The Territorial Government should take the responsibility for conducting these surveys.

19. **N.W.T. Home Statistics to be amplified.** Ongoing surveys should be made of the total population and should include, specifically, permanent residents (at least twelve months), transients (from a few weeks to a few months), "shift-work" individuals, military personnel (as in Alaska). These surveys should include vital statistics: age, sex, ethnic orientation and family status. TERIS data and the annual list of population by settlements should be completed. The N.W.T. must become the central collection agency for that part of the Canadian North.

20. **Usual data to be classified.** a. Migration data ought to be extracted from Family Allowances archives and given for the N.W.T. specifically. b. The *Report on Health* should specify the number of transients to which it refers. c. The N.W.T. should improve techniques for collecting data on the traditional economy.

21. **N.W.T. Yearbook.** The N.W.T *Statistical Abstract*, produced by Ottawa, ought to be made in the Territories, beginning with the 1979 issue. Such a Yearbook should incorporate all that is pertinent to N.W.T. situations.

22. **Demographic information to be collected from written texts and tapes.** We suggest that the massive, but very scattered, demographic information to be found in social sciences reports made by or through Federal or Territorial governmental agencies, university departments (theses and reports), private enterprise, indigenous groups, and individual writers should be classified. There are several hundreds of unpublished but available texts which have significant information on northern demography. Abstracts of some series (as, for instance, NORESSS) give an idea of the wealth of material available, but they do not produce information specified here.

23. **Use of unconventional material.** Researchers must be prepared to make greater use of unconventional, but nevertheless reliable, data compiled by the Health Care Plan and Family Allowances. Federal or Territorial departments which conduct many special surveys often gather data pertinent to the understanding of areas such as migration, manpower, tourism, cost of living and diseases.

24. **On going mapping of the ecumene.** Areas for residence (including temporary residence) and economic activity are variable factors in the N.W.T. It should be useful to have better data, both for winter and summer, on an annual basis. In part, research into this problem may be linked to the question of Canadian sovereignty and must take into account characteristics of native people and their living conditions.

25. **Atlas of the North.** If the project of an atlas of the Canadian North is to be realized, it should contain a major section on all N.W.T. peoples.

26. **Data processing.** We recommend a more intensive computerization of data and the activation of the territorial computer terminal.

27. **Monographic researches.** We also propose that a fair number of specific studies be undertaken. For example, inquiries into the rationale beyond migration, the threshold in classification of settlements, housing, quality of food, the level of ill health among adults, higher education, economic base for every settlement, and young peoples' ambitions and perceptions"[101] A particular effort should be made to determine what will happen to the population and the settlement at Nanisivik when mining operations cease, in ten years or more. Lastly, it should be useful to have another manpower survey such as the one made for 1960-1970.

28. **Seminars on population for administrators.** As soon as possible regular seminars should be prepared for northern politicians and administrators about practical demographic questions. Objectives should be to sensitize them towards hitherto neglected cultural matters, to encourage them to collect and improve northern statistics in their particular fields, and to increase the northern orientation of their territorial work.

29. **Circulate information on demographic matters.** We recommend that the N.W.T. Department of Information prepare simple briefings, pertinent to the territorial population. Texts could be published periodically by northern journals, in Yellowknife and outside, in native languages as well as in English and French. Demographic knowledge thus circulated will provoke some feedback.

MENTAL ATTITUDES

30. **Ethics.** Researchers should be aware of the moral implications of their work, conforming to rules enunciated by the "Man in the Biosphere Group."[102] Consideration must be given to the wishes of the native people.

31. **The global approach.** The universality of problems should always be kept in mind. Rather than studying socio-economic topics in isolation, they should be considered in a broader context. Certainly, one would hope to see more integration between political and economic areas; the former is linked to social questions and administered by the Territorial Government, while the latter is based on natural resources and controlled or activated by the Federal Government (as well as by private companies). The dichotomy in politics influences development, which in turn influences the population. Once again, changes in mental attitudes would be the first step.

32. **To proceed from the point of view of nordicity.** Many analytical tools and concepts have been designed in the South to cope with northern situations. This southern approach to research should not be exclusive. Canada needs to enunciate a rationale which can be adapted to northern research.

CONCLUSION

It is our duty to remind our readers that our study and projections are based on inaccurate statistics. The N.W.T. population includes five groups: white "permanent", Inuit, Dene, Métis, white "transient". Little is known about the last two categories which may represent as many as 15 per cent of the total number of inhabitants. Moreover, data on many areas such as unemployment and rate of occupancy in housing are only approximate. The quality of the basic data precludes deep and detailed results. The second major difficulty in projecting arises from external domination of the N.W.T.; decisions on mining, pipeline, airports, political transfer, land claims, defence, all of which will influence the future of the Northwest Territories, come from outside (i.e., the Federal Government and major companies) and are subject to secrecy until the last moment. In these conditions, our projections are tentative only; one need not place too much weight on the apparent precision of the tables, nor on the linear slopes of projected data.

However, in spite of these shortcomings in available data this paper brings some new insight into the fluctuations of the present N.W.T. population, and indicates the basic trends for the next ten years in fields such as urban concentration, level of municipalization, ethnicity, ageing, schooling, migration and labour. As well, it offers recommendations dedicated to researchers or politicians.

We have based our projection on the year 1976. At that time the severe recession which followed was not anticipated. It appears, now, that Projection A is closer to the reality, at least as far as the total population figure is concerned. However, in accordance with the "stop and go" pattern of increase in the white population in the Territories, we still expect some economic reactivation which should, at the end of the period (1985), result in the situation envisaged by Projection B.

FOOTNOTES

[1]Particularly, C-M. Lu and D.C.E.Mathurin, 1973; J.Reid, 1977 (see the *Bibliography* for full references).

[2]T.W. Foster, 1976 (see the *Bibliography* for complete reference).

[3]a. Canada, *A Catalogue of Statistics*, 1977.
b. For example, S. M. Meldrum and M. Helman, 1975.

[4]For example, D. Schweitzer, 1971.

[5]First issue of the *N.W.T. Stat. A.* in 1973, Ottawa, compiled by A. Krolewski. First issue of the *Canada N.A.* in 1975, Yellowknife.

[6]R. M. Bone and T. W. Foster, 1976. Several *Reports* have been published on the "Northern Population Series" in Saskatoon.

[7]R. Raghunathan, *Demographic data on the Yukon Territory and the Northwest Territories*. Proceedings, Northern Population Workshops I, Montréal, 1977, pp. 48-62.

[8]Prepared by K. de la Barre *et al.* Published by A.I.N.A., 1978.

[9]R. Castonguay, 1976.

[10]In W. C. Wonders, ed., 1972.

[11]*Population Projections*, Ottawa, 1973.

[12]*Measurement of the Value of Economic Activity in the North*, Ottawa, 1974.

[13]*Demographic Projections*, Yellowknife, 1977.

[14]D. C. E. Mathurin and N. Lafrenière, 1971.

[15]C.-M. Lu, 1976.

[16]N.W.T., *Survey of Education*, 1972, Yellowknife, 213 p. (Statistical Information, pp. 112-149).

[17]Among few studies here, P. E. Ostergaard, 1976.

[18]For example, S. M. Meldrum, *Frobisher Bay 1966-1969*. Ottawa, DIAND, 1975, 170 p.

[19]Peter J. Usher, "Native Land Claims and Socio-Economic Research in Northern Canada, "*Program and Volume of Abstracts*. London, U. Western Ontario, 1978, p. 51 (Annual Meeting, The Canadian Association of Geographers).

[20]R. M. Bone, in Weston, ed., 1976 *Summary Report, p. 19*.

[21]J. *Légaré* and L. Normandeau-Desjardins, "Infant and Child Mortality among Canadian Eskimos." Abstract of a paper circulated through the Committee on Northern Population Research, Montréal. *Canadian Studies in Population*, 2, 1975, pp. 101-109.

[22]R. M. Bone, "The DE JURE method of census taking and the implications for the Canadian North," in *The Musk-Ox*, 20 1976, pp. 86-87.

[23]W. T. R. McLean and M. E. Stiles, *Cost of Living Study for the Northwest Territories*, Edmonton, 1975, 134 p.

[24]J. Reid, 1977, p. 6

[25]C.-M. Lu and D. C. E. Mathurin, 1973, p. i.

[26]T. Butters, *Debates*, N.W.T. Legislative Assembly, Yellowknife, May 19, 1977, p. 421.

[27]H. L. Laframboise, "Research Needs for Active Population Programs," *Plan Canada*, June 1976, pp. 89-93 (Reprint Series, Institute for Research on Public Policy).

[28]Most of the following pages have been extracted from the English translation, *Canadian Nordicity*, of *Nordicité Canadienne*, Montréal, Harvest House, 1979, pp. 38-43.

[29]R. M. Bone in *The Polar Record*, 16 (103), 1973, pp. 553-557.

[30]Canada, *Perspective Canada II. A Compendium of Social Statistics 1977*, Ottawa, *Statistics Canada*, p. 335, chart 14.3.

[31]Canada, *The People in the North*, Ottawa, DIAND, 1973, p. 5.

[32]For Hay River, see also note 89 and Appendix C-3.

[33]M. Freeman, in Canada, *Science and the North*, 1973, p. 45.

[34]One must remember that part of the difference between these two sets of projections comes from factors other than immigration, such as basic population and its natural increase. Moreover, the specific data from which population projections are made are confused, because some demographers base their studies on permanent population and others on current population, the latter being higher by roughly 4,000 people.

[35]That figure is in accordance with the evolution of current population, which shows between 1966 and 1975 an average increase of 4.9 per cent per year.

[36]B. Meneley, A. Janisch and David Searle, *Debates*, Yellowknife, February 1, 1978, pp. 456, 457 and 459.

[37]S. Hodgson, *Debates*, Yellowknife, January 20, 1978, p. 2.

[38]C.-Y. Kuo, *The Application of an Optimizing Model for Economic Development to Problems of Economic Planning in Northern Canada*, Ottawa, DIAND, 1972, p. 63.

[39]Unfortunately, our study was concluded too soon to make use of Dr. J. Stabler's report which considers North-South economic relations. Personal discussions, Yellowknife, October, 1977.

[40]E. Casetti, Economic Growth and the Population Explosion: Simulation Experiments using a Growth Model with Population Endogenous. *The Journal of Development Studies*, 13(3), 1977, pp. 238-261. Also B. F. Chadenet, Effets . . . de population sur le développement économique, in *Futuribles*, Paris, no. 11, 1977, pp. 259-274.

[41]A villain has been easily identified: "We are suffering from a social and economic impact from the Berger Inquiry." D. M. Stewart, *Debates*, Yellowknife, January 20, 1978. The speaker would, however, agree that many factors influenced the governmental decisions following the *Report*.

[42]Age data by ethnic group were not available from *Census* 1976.

[43]Canada, *The Canadian Arctic*, Ottawa, Geographical Branch, 1951, p. 64.

[44]*The Arctic Circular*, Ottawa, XVI, no. 4, 1963-64 (issue published in April 1966), pp. 47-60.

[45]*Distribution of Population. Canada 1961*. Prepared from *Census* 1961 data by the Dominion Bureau of Statistics for the *Canada Year Book*, Ottawa.

[46]S. M. Meldrum and M. Helman, 1975, p. 51.

[47]L.-E.H., *Canada, A Geographical Perspective*, Toronto, Wiley, 1973, pp. 29-38. Translated from Frenc*om French by M. C. Storr* Jackson. Some polar values (VAPO) of the Mackenzie Middle North are: Fort Liard 441; Yellowknife 3Eife 390; Fort Simpson 377; 343; Hay River 320. In the *Far North*, Resolute registered 775 (VAPO), Igloolik 755, Pond Inlet 712, Cambridge Bay 690, Rankin Inlet 594, Frobisher Bay 584, Belcher 521 and Aklavik 511.

[48]In 1976, Frobisher Bay was fourth in rank over Fort Smith.

[49]That fact may be illustrated in the ethnic composition of settlement councils. In September 1977, in the five "cities" and towns which account for 48 per cent of the territorial population, Councillors were 88 per cent white, 5 per cent Inuit, 5 per cent Métis, 2 per cent Dene. Source: N.W.T. Association of Municipalities, table, Yellowknife, 1977. See also note 62.

[50]From June 1st, 1976 to January 1st, 1978, the population of Yellowknife has increased very little (19 individuals) or a rate of about 0.2 per cent per year. We regard this as a temporarily static situation.

[51]As an example of this artificial fashion of seeing that aspect of the North, here is one sentence: "There are now only 10 places with fewer than 100 people." J. D. Flynn, "The Development of Autonomy in the N.W.T.", *The Musk-Ox*, 17, 1975, p. 25.

[52]M. Sangris, *The Interpreter*, Yellowknife, Vol. 3, No. 11, December 1977, p. 4. Also N. Birss, "Back to the Land", *North*, Ottawa, XXV, 1, 1978, pp. 2-5.

[53]*Canada's North, 1970-1980*, Ottawa, 1972, p. 10.

[54]A. R. Zariwny, 1977, pp. 73-74.

[55]T. R. Berger, Vol. 2, 1977, p. 9

[56]Jack Witty, *The Interpreter*, Yellowknife, March 1978, p. 5. Only 8.1 per cent of workers engaged in hunting-trapping-fishing during Fall 1976 were 20-24 years old; that percentage was lower than in every other category of occupation inside the Territories, N.W.T., *TER300*, Yellowknife, April 1978.

[57]"Total number of localities" means here, a. localities usually tabulated, and b. all campsites, small or large.

[58]*What is the Outpost Camp Program?* Yellowknife, 1976, p. 1

[59]The percentage for 1941 is hardly exact because, particularly at that time, the census of white and native people had not the same accuracy.

[60]C.-Y. Kuo, *The Effect of Education on Earnings in the Mackenzie District of Northern Canada, Ottawa*, DIAND, 1971, pp. 8 and 11.

[61]*N.W.T. Metis Survey, 1977*, to come. In the N.W.T., existing estimations of the Métis population vary from 2,000 to 4,000; someone has spoken of as many as 7,000. Two thousand seems a reliable figure, now. These 2,000 comprise approximately 4 per cent of the total population of the N.W.T.

[62]N.W.T. Association of Municipalities, Yellowknife, September 1977 (statistics). One has to note that the situation has totally changed in 10 years. The following statement describes the previous situation: "To my knowledge, there were no northern-born administrators before 1967," J. D. Flynn,"The Development of Autonomy in the Northwest Territories", *The Musk-Ox*, 17, 1975, p. 24. See also note 49.

[63]Calculation from Meldrum and Helman, 1975, pp. 49-50.

[64]*Report on Health Conditions . . .*, 1976, p. 3.

[65]In relation to the increase in the number of adults is the development of diseases of old age. In 1960 malignant neoplasms and cardiovascular problems caused 8 per cent of deaths; in 1973, values increased to 28.2 per cent, and in 1976, 31.3 per cent. *Vital Statistics 1960*, Ottawa 1962, and *Report on Health Conditions*.

[66]J. Reid, 1977, pp. 53 and 55.

[67]N.W.T., *1977 Annual Report of the Government of the N.W.T.* Yellowknife, 1978, p. 43.

[68]S. Hodgson, *Debates*, Yellowknife, January 20, 1978, p. 5. Apparently, that number does not include native teaching assistants.

[69]C.-M. Lu and D.C.E. Mathurin, 1973, p. 23.

[70]C.-Y. Kuo, *The Effect of Education on Earnings in the Mackenzie*, Ottawa, 1972, p. 4.

[71]N.W.T. *Debates*, Question W5-50, September 16, 1973.

[72]J. P. Allen, "Changes in the American Propensity to Migrate", *AAAG*, Washington, 67, 1977, pp. 577-587.

[73]G. Mauzeroll, *Total Employment Estimates for the Yukon and the N.W.T., 1967, 1968 and 1970*. Ottawa, 1973, 20 pp. We have not yet seen the report of the "Revised Labour Force Survey into the North", a federal project scheduled around 1977. (R. Castonguay, 1976, p. 41).

[74]S. Ostry, *Différences provinciales du taux d'activité*,Ottawa, Bureau Féd de la Statistique, 1968, p. 3. D.C.E. Mathurin and N. Lafrenière, 1971, p. 7. J. Reid, 1972, p. 48.

[75]S. M. Meldrum and M. Helman, 1975, calculations from data on pp. 41 and 63.

[76]*1971 Census of Canada*, 94,707, Bull. 3-1-7, 1974.

[77]T. R. Berger, 1977, Vol. 1, p. 135.

[78]According to J. Palmer, 1974, pp. 75-76, wages and salaries paid to non-residents amount to 29 per cent of the total paid for 1969.

[79]S. M. Meldrum and M. Helman, 1975, p. 67.

[80]S. M. Meldrum, 1975, p. 73. For Cape Dorset a detailed survey showed a rate of unemployment not far from that of Frobisher Bay. R. D. Sparham, *Cape Dorset General Information at January 15, 1971.* Cape Dorset, 1971, pp. 1-2 (unpublished).

[81]G. Mauzeroll, 1973, p. 18.

[82]S. M. Hodgson, 1975, p. 671.

[83]Comparing TERIS compilation in 1977 with what is known about the structure of population, one may think that the working population was underestimated for Dene, quite fair for Inuit and overestimated for whites (the influence of transients is felt here).

[84]NORESSS, Ottawa, 7.1, Up-date, February 15, 1978.

[85]Calculation from D. C. E. Mathurin and N. Lafrenière, 1971, p. 39.

[86]"30 per cent of territorial employees are of native origin." S. Hodgson, *Debates*, Yellowknife, January 20, 1978, p. 7.

[87]T. R. Berger, 1977, Vol. 2, p. xii.

[88]Canada, *Regional impact . . .*, 1973, pp. 175-176. There have been many other estimations; all show great labour requirements.

[89]Stanley and Associates, *Study*, Edmonton, 1975. (Quoted in T. R. Berger, Vol. 2, 1977, p. 60). This predicts that Inuvik will have 10,000 inhabitants in 1985. Our own estimates (based on our hypothesis of no pipeline before 1985) lead to 4,291 people. As far as Hay River is concerned, for 1985, accelerated growth would put the town population at 8,740, or 3,207 more people than according to our own calculations (Table 3.3 and specific section in Chapter One).

[90]R. B. Gibson, *The Strathcona Sound Mining Project*, Ottawa, SCC, 1978, 274 pp. In summer 1977 and winter 1978, Inuit represented about 15 per cent of the working population of Nanisivik.

[91]N.W.T., *An Assessment . . .*, Yellowknife, 1978, pp. 5-8.

[92]Gemini North, 1973, pp. 103-105.

[93]Van Ginkel, 1975, pp. 103-105/123-128.

[94]N.W.T., 1977 *Annual Report of the Government of the N.W.T.*, Yellowknife, 1978, p. 34.

[95]N.W.T. *Vocational Training in the Eastern Arctic*, Yellowknife. Recommendation to the Legislative Assembly 1-65, 1978, 8 pp.

[96]From 1976 to 1985, according to Projection B, 31 per cent of the total increase will be people from 15 to 30 years of age.

[97]R. M. Bone and T. Foster, Saskatoon, 1976, p. 37.

[98]Canada, *Science and the North*, Ottawa, 1973, p. 17.

[99]A. J. Siggner, *A framework for demographic research on the North.* Proceedings, Northern Population Workshops I, 1977, pp. 72-86.

[100]L.-E. Hamelin, In *The Musk-Ox*, 10, Saskatoon, 1972, p. 7. Translated from French by W. Barr, *Cahiers de Géographie de Québec*, 33, 1970, p. 314.

[101]P. George, 1976, pp. 24 and 39.

[102]Canada, *Ethical principles . . .*, Ottawa, 1977; M. R. Freeman, "Science and Ethics in the North", *Arctic*, 30, 2, 1977, pp. 71-75.

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APPENDICES

A — GLOSSARY

All population — Total population in the N.W.T. at any given moment. Includes permanent people, military personnel, weekly-transient workers, long-term visitors . . .

Amerindian or Amerind. — See Native. Noun and adjective.

Current population — Present population including transients (other than tourists and days-floating population). Three categories: low current, average current and high current population. Concept particularly useful for white population studies.

Days-floating pop. — Transients of less than a week's duration.

Euro-Canadians — See "Others."

External migration — Migration in and out, across the external boundaries of the Northwest Territories.

Far North — Area with a high level of nordicity. The Arctic, *sensu stricto*.

Kabloonization — Among Inuit, cultural transfer towards whites' style (after F.G. Vallee, 1962).

Middle North — Area characterized by moderate nordicity. In the N.W.T. the Mackenzie Valley south of Great Bear Lake. Climatically, subarctic. as opposed to Far North.

Mid-year situation — Fixed on June 1st, according to the custom of the national *Census*. It is actually not a "mid-year" situation because it corresponds to only five months, and June 1st is an early date with regard to seasonal migration in the N.W.T. Case of Projection B.

Minorization — When a sector of the population crosses over the threshold of 50 per cent of the total population.

Monthly-transients — Migrants who have been in the North for at least a few months, but less than a full year. Included in current population.

Native — Inuit and Dene; all aboriginal people. For our purposes, "native" does not include white people born in the N.W.T.

Native activities — Refers to both wage employment (as in the South) and to non-salaried employment (hunting, fishing, and trapping). The same concept may be applied to unemployment.

Net migration — Arithmetical difference between in-migration and out-migration for a given period (monthly, quarterly, yearly, years). See external migration.

Nordicity — State and level of the North. Also the perception of "northernness."

Northern Canada — N.W.T., the Yukon, and part of seven provinces (see map).

N.W.T. Home Statistics — Data produced by the Northwest Territories Government through specific censuses or studies, originating mostly in Yellowknife.

"Others" — Those individuals who are neither Inuit nor Dene. Mostly white people (Euro-Canadians), but may include some Métis and non-Caucasian outsiders.

Permanent population — Northerners with more than one full year of continuous residency. Duration of "permanency" shows wide variations among ethnic groups. Moreover, there are "life permanency" (expressed by the slogan: "I was born here"); "years (ten of five) permanency" (both categories give a low figure for the permanent population); "one-year permanency" and "three-months' administrative residency": (this latter category is not recognized by us as a category of permanent people). Permanent people may be native and white.

Projection A — Concerns the permanent population. Gives estimates for December 1976 to 1985.

Projection B — Concerns the current population. Gives estimates for June 1976 to 1985.

Weekly-transients — Migrants who are in the North for a few weeks but less than a few months.

Year-end situation — Fixed on December 31st. Natural increase and net migration data for twelve consecutive months are added to the total population as it appears on January 1st. Case of Projection A.

B — SELECTED SERIES OF DATA

TABLE C - 1

External migration. Northwest Territories and Yukon, 1962 - 1976

Year	In-migration	Out-migration	Net migration
1962	4,012	4,550	-538
1963	3,717	4,559	-842
1964	4,138	5,584	-1,446
1965	3,950	4,431	-471
1966	4,562	4,842	-280
1967	4,839	4,523	316
1968	5,013	4,343	670
1969	4,843	3,528	1,315
1970	6,462	3,989	2,473
1971	7,338	4,765	2,573
1972	7,222	5,747	1,475
1973	5,865	6,550	-685
1974	7,129	6,880	249
1975	7,052	6,430	622
1976	6,264	7,024	-760
Total 1962-1976	82,406	77,735	4,671
Average	5,494	5,182	312

Source: *Statistics Canada.* Quarterly Interprovincial Migration Estimates, from Family Allowances.

Note: Statistics for both Territories. We have been advised to take two-thirds of these data to get an approximate figure for the N.W.T. alone.

TABLE C - 2

Distribution of family median income, by districts and groups of communities, N.W.T., 1970*

With highest income (+ $10,000)		With lowest income (- $2,000)		District
Mackenzie				**$9,228**
Tungsten	13,750	Fort Liard	1,800	
Norman Wells	12,917	Colville Lake	1,750	
Yellowknife	11,511	Rae Lakes	1,667	
Pine Point	10,926	Nahanni Butte	1,333	
Inuvik	10,921	Paulatuk	1,000	
Fort Smith	10,089			
Port Radium	10,000			
Franklin				**$4,805**
Frobisher Bay	10,714	Port Burwell	2,000	
		Igloolik	1,818	
Keewatin				**$3,819**
		Pelly Bay	2,000	

*Source: C.-Y. Kuo and D. C. E. Mathurin, 1976, pp. 10, 54, 55 and 56 (data from *Statistics Canada*).

TABLE C-3

Populated places, Northwest Territories, 1978-1986 (January. Low current population)

	1978	1986
SETTLEMENTS WITH SETTLEMENT COUNCILS		
Arctic Red River	119	140
Broughton Island	348	448
Cambridge Bay incl. (DEW-Line)	859	1,080
Cape Dorset	684	880
Chesterfield Inlet	256	329
Clyde River	412	530
Coppermine	801	1,029
Enterprise	40	47
Eskimo Point	891	1,147
Fort Good Hope	446	524
Fort McPherson	790	928
Fort Norman	290	340
Fort Providence	566	664
Fort Resolution	519	609
Gjoa Haven	454	584
Grise Fiord	95	122
Hall Beach	349	450
Holman Island	306	392
Lac La Martre	224	263
Lake Harbour	268	345
Norman Wells	330	391
Paulatuk	160	207
Port Burwell		no data
Rae Lakes	171	201
Repulse Bay	296	380
Resolute Bay (incl. the base	181	232
Sachs Harbour	173	221
Snowdrift	258	303
Spence Bay	464	597
Wrigley	174	204
SETTLEMENTS WITHOUT S. COUNCILS		
Colville Lake	73	86
Detah	161	189
Fort Liard	325	381
Jean Marie River	49	57
Kakisa Lake	40	47
Nahanni Butte	96	113
Trout Lake	61	72

		1986
CITY		
Yellowknife	9,969	15,419[a]
TOWNS		
Fort Smith	2,410	3,193[a]
Hay River	3,483	4,114[a]
Inuvik	3,065	3,685[a]
Pine Point	1,878	2,222
VILLAGES		
Fort Simpson	1,083	1,276
Frobisher Bay	2,626	3,885[a]
HAMLETS		
Aklavik	797	981
Arctic Bay	414	533
Baker Lake	1,021	1,306
Coral Harbour	423	541
Fort Franklin	463	543
Igloolik	737	949
Pangnirtung	872	1,118
Pelly Bay	258	332
Pond Inlet	620	797
Rae-Edzo	1,239	1,454
Rankin Inlet	987	1,592[a]
Sanikiluaq	320	413
Tuktoyaktuk	746	954
Whale Cove	182	234
OTHERS		
Bathurst Inlet	28[b]	122
Bay Chimo	66	no data
Cape Dyer	11	no data
Nanisivik	264	317
Paradise Gardens	57	no data
Port Radium	132	156
Reliance	9	11
Tungsten	325	385
Unorganized[c]	172	no data
Total[d]	46,386[b]	61,344[a]

Source: N.W.T. Home Statistics, Yellowknife, Department of Planning and Program Evaluation, March 1978.

[a] N.W.T. statisticians have used an ethnic factor to estimate the January 1986 population and they made local corrections to give 0 net migration value to Hay River and Inuvik and a higher (than mean) increase to Rankin Inlet, Yellowknife, Frobisher Bay and Fort Smith.

Compared to our own Projection B, which projects a total of 62,087 individuals by June 1985 of which Yellowknife would represent 14,000, Hay River 5,333, inuvik 4,291, and Fort Smith 3,151. Our projected increase in population reflects combined changes among ethnic groups and classes of settlement (the concentration factor). To achieve these concentrations, urban employment has to grow more than its present rate.

[b] For Bathurst Inlet, 94 is also given. Such an addition produced a total of 46,452 in January 1978.

[c] This category comprehends about 15 small cites. Outpost camps were not considered, however.

[d] The municipal structure (e.g., city, town) is the one in existence in early 1978.

ABOUT THE AUTHOR

Dr. Louis-Edmond Hamelin was born in St. Didace, Québec in 1923. He has studied widely receiving degrees from the University of Montréal in 1945, Laval University in 1948, the University of Grenoble, France in 1951. In addition, he has studied at McGill University, University of Paris and the Scott Polar Institute at Cambridge.

Currently the Recteur of the University of Québec at Trois Rivière, Dr. Hamelin has devoted his professional career to the study of political and economic geography with special emphasis on the North and northern peoples.

While Professor of Geography at Laval University, Dr. Hamelin founded the Centre for Northern Research in Québec. He has published books and papers on many northern phenomena, i.e. Canadian Nordicity, Montréal, Harvest House, 1979, 374 pp.

Among his many awards are the Chauveau Medal of the Royal Society of Canada and the Massey Medal from the Royal Canadian Geographical Society. In 1967, Dr. Hamelin was awarded the Centennial Medal in 1974 and named an officer of the Order of Canada in 1974. He served on the Council of the Northwest Territories from 1971-1975 and in that capacity initiated the legislation creating the Science Advisory Board of the Northwest Territories.

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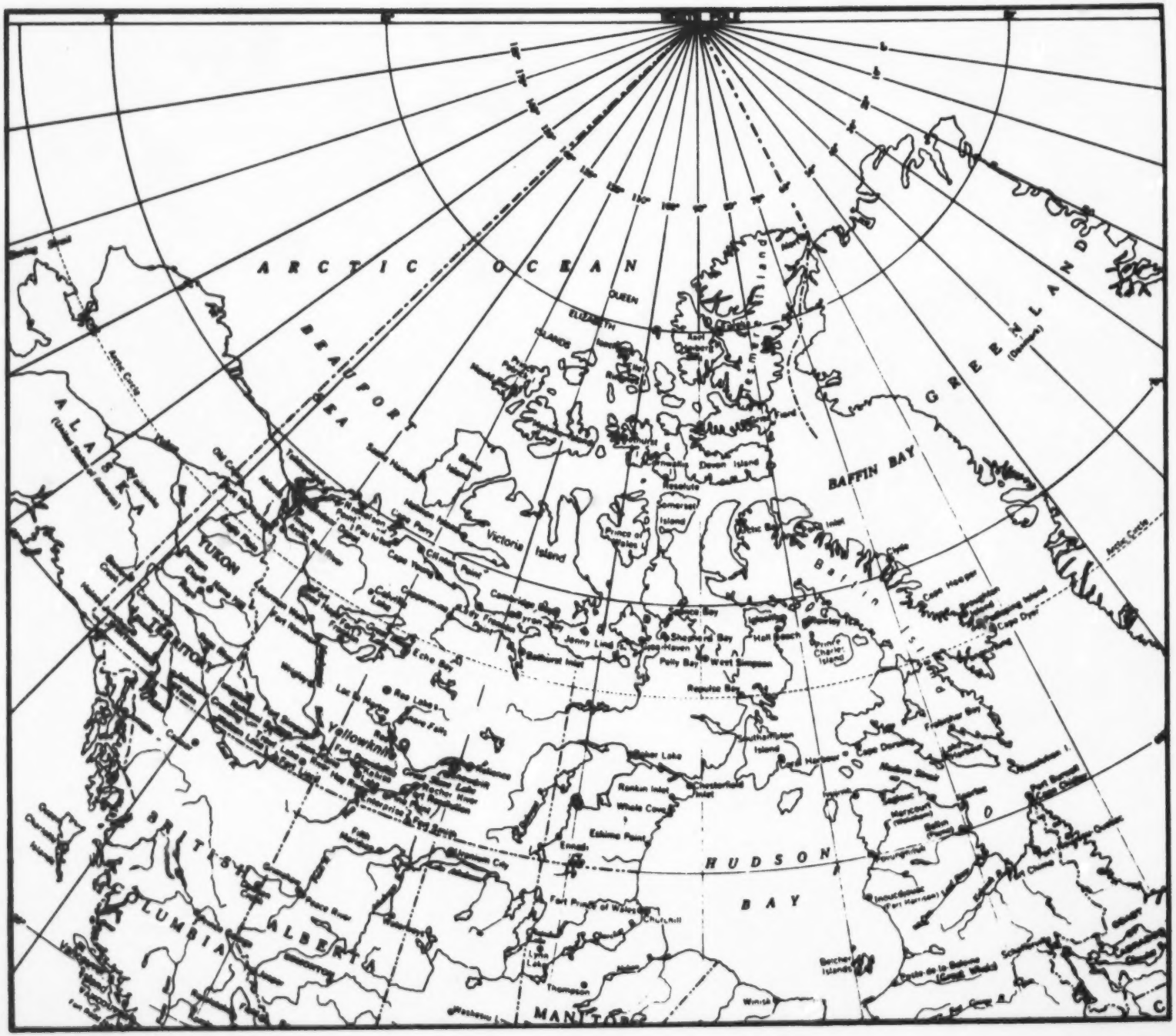
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ALBERTA
MANITOBA
Victoria Island
Banks Island
Prince of Wales Island
Somerset Island
Devon Island
Ellesmere Island
Baffin Island
Southampton Island
Melville Peninsula
Boothia Peninsula
Queen Elizabeth Islands
Arctic Circle
Resolute
Cape Hooper
Cape Dyer
Cape Parry
Inuvik
Tuktoyaktuk
Aklavik
Old Crow
Fort Yukon
Dawson
Mayo
Whitehorse
Watson Lake
Fort Nelson
Fort Simpson
Yellowknife
Fort Smith
Fort Resolution
Hay River
Fort Providence
Fort Rae
Rae Lakes
Echo Bay
Cambridge Bay
Jenny Lind
Shepherd Bay
Hall Beach
Repulse Bay
Frobisher Bay
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Mackenzie River
Peace River
Athabasca
Lake Athabasca
Lake Winnipeg
Lake Manitoba
Lake Winnipegosis
Lake of the Woods
Kenora
Dryden
Thunder Bay
Sault Ste. Marie
Sudbury
Timmins
Cochrane
Moosonee
Moose Factory
Fort George
Fort Rupert
Fort Chimo
Port Harrison
Great Whale River
Belcher Islands
Ile de la Baleine
(Great Whale)
Schefferville
Knob Lake
Labrador City
Wabush
Goose Bay
Hopedale
Nain
Cape Harrison
Port Burwell
Frobisher Bay
Lake Harbour
Cape Dyer
Broughton Island
Clyde River
Arctic Bay
Pond Inlet
Resolute
Cape Hooper
Inuvik
Tuktoyaktuk
Aklavik
Old Crow
Fort Yukon
Dawson
Mayo
Whitehorse
Watson Lake
Fort Nelson
Fort Simpson
Yellowknife
Fort Smith
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